PHILOSOPHICAL DISSERTATIONS

On the Uncertainty of

HUMAN KNOWLEDGE.

By the Marquis *D'ARGENS*,

Author of the *Jewiſh Spy*.

VIZ.

I. Of the Uncertainty of Hiſtory.
II. Concerning Logick.
III. Concerning the General Principles of Natural Philoſophy.
IV. Concerning Metaphyſicks.
V. Concerning judicial Aſtrology.

With ſome REMARKS on the

THEOLOGY of the *Grecian Philoſophers*.

To which is added,

Monſ. MAUPERTUIS's Diſſertation upon GRAVITY, &c.

In TWO VOLUMES.

Tranſlated from the LAST FRENCH EDITION.

VOL. I.

The Search of Truth ought to ſtop no where till there is no more to find.

LONDON:
Printed for *J. Wren*, at the *Bible* and *Crown*, in *Saliſbury-Court*, *Fleet-Street*, 1753.

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THE AUTHOR'S PREFACE.

I Preſent the Reader with a new Edition of a Book, of which thoſe before publiſhed ought to be eſteemed as rude Eſſays. It is enlarged above one half, and the Additions are as uſeful at leaſt, as the Body of the Work was before. The Succeſs it has met with engaged me to review it with the greateſt Care, and to do all that lay in my Power, to give it the finiſhing Stroke.

I have invariably purſued my firſt Deſign, which was to be ſerviceable to the polite Part of the World, that is, to Perſons for whoſe Pleaſure and Inſtruction, the Learned ought to be more ſolicitous, than they have hitherto been. It ſhould ſeem that the generality of theſe Gentlemen, are very unwilling, if not almoſt aſhamed, to write in a manner, which may be underſtood by the Bulk of Mankind. By the Bulk of Mankind, I mean thoſe thoſe who are fond of reading, and yet will not give themſelves

the Trouble, to underſtand Books, which ſeem to be made only to be placed in the Temple of *Diana*, by the ſide of the obſcure and ſublime Productions of *Heraclitus*. The Learned are greatly deceived, in ſuppoſing, that there are a number of Perſons who will do for them, what *Euripedes* did to obtain the Writings of that *Greek* Philoſopher. He was at the Pains to read thoſe myſterious Writings ſo often, that he learnt them by Heart, and afterwards made them publick. I can aſſure theſe Gentlemen, that ſince they are quite indifferent whether they are underſtood or not, very few will rack their Brains in endeavouring to underſtand them. It is true, they will have the Satisfaction of calling thoſe Blockheads, who ſhall contemn their Works; but theſe in their Turn, will look upon them, as mere Pedants: Thus you ſee, both Parties will be even with each other.

Though I would have an Author write in a clear intelligible Stile, I do not mean that he ſhould ſtoop to write in the Language of the Mob; there is an Art of Diſcourſing upon the moſt ſublime Subject, without ſoaring out of the reach of common Capacities. None have been Maſters of this Art more than Mr. *Bayle* and Mr. *De Fontenelle*; their Works are undoubted Proofs that the moſt abſtruſe Subjects, may be treated in ſuch a Method, as to render them eaſily underſtood.

There

There is nothing more ridiculous than to imagine, that there are not a great Number of Perſons, of different Ranks and Occupations, who have ſpent a good deal of Time in learned Enquiries, and who have gained a good Stock of real Knowledge. If theſe learned Gentlemen, who are ſo puft up with their own ſuperior Abilities, were a little better acquainted with Courtiers, Officers, and even many of the Fair Sex, they would ſoon be undeceived, and get rid of their Prejudice; for though a Man may have a Taſte for polite Learning, it does not therefore follow, that he ſhould be obliged to be at uncommon Pains, to read and comprehend the Work of an Author ſo oſtentations of his Learning, as to render the Subject he treats of hard and crabbed. It ſhould not therefore appear at all ſtrange, that ſo many Works which are ſtuffed with *Greek* and *Latin*, ſhould be ſuffered to lie peaceably unaſked for, and grow mouldy in a Bookſeller's Shop.

Nothing is more uſeful than an inſtructing and amuſing Erudition; nor nothing more irkſome than a Book which contains little elſe but a confuſed Chaos of Learning; the moſt inquiſitive Mind is afraid of being overwhelmed in the dreadful Abyſs. In reality, it is a Sign of Wiſdom not to lose Time in reading Works of this Kind.

Some learned Authors complain heavily of the Taſte of the Age; according to them

there is nothing will go down at preſent, but Trifles and Romances. It is eaſy to prove that they are deceived: the Works of *Bayle*, *Leibnitz*, *Locke*, *&c.* are read with eagerneſs. And their own would be read too, if they had had ſkill enough to have employed their Erudition, and their Philoſophy to as much Advantage as theſe great Men.

I ſhall make an End of this Preface, which though very ſhort, perhaps will be ſufficient for my Condemnation; I am afraid of being accuſed of having made but a wretched Imitation of the great Models, which I have ſet before me. If I have not ſucceeded, I hope my Readers will excuſe me, for the Sake of a good Intention. However, the good Reception which the firſt Edition of this Work met with puts me in Heart: my Readers will meet with ſome new ſhort Diſſertations; for I may give that Title to thoſe pretty long Remarks inſerted herein, which may perhaps deſerve their Approbation. I have endeavoured to collect whatever I apprehended to be moſt intereſting and moſt inſtructive, I have alſo conſiderably augmented and altered the Body of the Work. I ſhall not mention here the Method which I have made uſe of, the Reaſons of which will better appear in the Preliminary Diſcourſe; and ſince they have already met with Approbation in the firſt Edition, I hope they will not be leſs fortunate in this which I now offer to the Publick.

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Phi-

A PRELIMINARY DISCOURSE

Concerning the DESIGN of these DISSERTATIONS.

SECT. I.

A general Plan of the Work.

I HAVE always had a ſtrong Deſire to reſcue the World from the Pride and Pedantry of Smatterers in Learning. Ever ſince I made uſe of that little Light, which Heaven has beſtowed upon me, I have been ſenſible, that the Perſons for whom I had the greateſt Veneration, and whom I regarded as the Oracles of Science, were only bold Ignoramus's; who, being firſt miſled by their own Vanity, could not defend themſelves, but under the Covert of ſome unintelligible Terms, againſt the Attacks of Reaſon and the Lights of Nature, whom they declared to be their everlaſting Enemies. I could not bear that a Man ſhould claim a Right to deſpiſe the ſenſible Reaſonings of others, who, becauſe they had not read *Ariſtotle* and *Scotus*, ſeemed to be permitted to make uſe of their

Reaſon only in the common Affairs of Life. For thoſe Sciolists can hardly allow theſe Gentlemen, whom they look upon as overwhelmed in Ignorance, the Liberty to act a little more intelligently than the brute Creation. *But, they ought to conſider, that God has not been ſo niggardly of his Favours to Men, that, contenting himſelf with making them two-legg'd Creatures, he has left it to the Care of* Ariſtotle *to make them rational* *.

Reaſon is the Gift of Heaven, granted to all Men in general; and thoſe who will make uſe of it, and reflect with Attention upon themſelves, and upon the Ideas, which they have in their own Minds, need neither ancient nor modern Philoſophers to diſcover thoſe Truths, that are neceſſary to their Happineſs, and the Conduct of their Lives. I allow, that Inſtructors are a great Help and Eaſe, in finding out a great many Difficulties, which, without their Aſſiſtance, might retard our Progreſs. But theſe Inſtructors ought to be truly learned, for otherwiſe their Inſtructions will do more hurt than good. Far from clearing up our Doubts and Difficulties, they will confound our Underſtandings, and darken the clear and diſtinct Ideas, which we may have. Thus, whoever would apply himſelf to find out Truth, muſt carefully avoid thoſe Principles, which would for ever lead him the wrong way.

SECT. II. *That the moſt learned Men are ignorant of a great many Things.*

THE greateſt Men, and thoſe who diſtinguiſh themſelves the moſt in the Sciences they ſtudy, ingeniouſly confeſs, that there is a vaſt

* *Locke*'s Eſſay on Human Underſtanding.

vaſt Number of Things above their Knowledge, and which the Mind of Man is not capable of comprehending. By this Confeſſion, they leſſen a Number of Difficulties, which is but Labour in vain for thoſe who will enquire into them; and who, after they have ſtudied a long time, think they know ſomething, when they have only got the Knack of confounding their Ideas, and of communicating their Ignorance and Prejudice to ſuch as have the Misfortune to be inſtructed by them.

Theſe Smatterers in Learning have never conſidered, that it is a neceſſary Conſequence to fall into Error, if they give their abſolute Aſſent to Things that are not abſolutely evident. *Falſhood and Confuſion*, ſays Father *Mallebranche*, *reign in the common Philoſophy, becauſe that Philoſophers are ſatisfied with an Appearance of Truth very eaſy to be found, and ſuitable to their Vanity and Intereſt. Do not we find almoſt every where an infinite Diverſity of Sentiments upon the ſame Subjects, and conſequently an Infinity of Errors? Yet for all this, a great Number of Learners ſuffer themſelves to be ſeduced, and blindly ſubmit to the Authority of theſe Philoſophers without underſtanding their Opinions* *.

Credulity, and the Vanity of deſiring to know every Thing, are the two Sources of Error and Ignorance. The truly Learned ſpeak doubtfully of doubtful Things, and frankly confeſs their Incapacity concerning thoſe that are above the Reach

* *Mallebranche*'s Recherche de la Vérité, Book I. Ch. III. p. 11. See towards the End. Is it not ſurpriſing, that Father *Mallebranche* ſhould himſelf fall into an Error which he knew ſo well how to ſhun? Never was the Pride of Dogmatical Perſons ſo much abated by any one as by him on ſeveral Occaſions; and in many others he has been more poſitive than the very Perſons he condemns.

of human Underſtanding. It is true, they think they know much leſs than thoſe who pretend to know all Things: But however, they are certain of thoſe Things which they do know, and the others are ignorant even of thoſe Things, which they think they know.

SECT. III. *Of the Sciences, in which we find the greateſt Certainty.*

THERE are ſome Sciences, ſuch as Geometry, Algebra, a great Part of Aſtronomy, and Experimental Philoſophy, in which thoſe who employ their Time and Study may hope to walk without going aſtray. The Light of Truth almoſt always ſhines upon Geometrical Operations, the Solutions of Algebra, the Aſtronomers Calculations, and the Experiments of Natural Philoſophers. If they happen to be miſtaken, they can find out their Errors themſelves; they may be ſhewn them in a ſenſible manner, and be led, as it were, by the Hand to Truth. But, in Logic, and Metaphyſics, and that part of Natural Philoſophy, that treats of general Principles, the Mind may err with Impunity, without fearing to be ſet right: There is a wide Field, and it may take its free Courſe; and as the Subjects to be examined are impenetrable, the Scioliſts may there give their Conjectures as authentic Deciſions. One would think, that this is ſtill the Time of the weſtern Schiſm, and that every Profeſſor of Philoſophy is a Pope, who determines, that ſuch a Set of *Ariſtotle*'s and *Scotus*'s Opinions ſhall for the future paſs for Articles of Faith.

One Thing, which I have taken Notice of, and which is obvious to every Obſerver, is, that in Schools, and among the Smatterers in Learning

ing, there is little Eſteem made of Geometry and Aſtronomy, *&c.* They ſeldom give young People any Idea of Mathematical Sciences; but they teach them all the frivolous Quirks in the Logic of *Scotus* and St. *Thomas*, and eſpecially in that of *Ariſtotle*. They teach them to ſquabble and diſpute, with a great deal of Warmth, about his eight Books of Phyſics, which are only a meer Heap of Words. Not that it would be more difficult to ſtudy ſome uſeful Science rather than theſe fruitleſs Branches of Learning; but, were it not for Diſputation, theſe Janglers could not Diſplay their Parts to Advantage. It is with a Schoolman, as with the Counteſs of *Pimbeche*; the wrangling Lady thinks,

Law-ſuits are the Delight and Joy of Life.

So the Regent of a College thinks,

To live without Diſpute, there's no Delight.

Thus theſe Smatterers in Learning find in common Logic, in the general Principles of Philoſophy, and the Metaphyſics of the Schools, a Field of Battle worthy of their Manhood. By their Diſtinctions, Diviſions, and Sub-Diviſions, they augment the Uncertainty of the Subjects they diſpute upon, till they render them wholly unintelligible.

SECT. IV. *Of the Diſſertations contained in this Work.*

BEING vexed to ſee good Senſe deſpiſed, I formed a Deſign of proving to a Lady of excellent Qualifications (to whoſe Country-Houſe I often went to ſpend a few Days) that her Chap-

lain, a great Stickler for *Ariſtotle*, was a ſtupid Fellow. This Lady, who had a great Share of Wit, and good natural Parts, but being brought up at a diſtance from People, who could inſtruct her in the moſt uſeful Sciences, never heard ſpeak of them, but in the ſix Weeks which ſhe ſpent once a Year in the Country, thought that I undertook an Impoſſibility. *Do you know*, ſaid ſhe to me, *that my Chaplain underſtands* Greek, *and ſays, that your* Des-Cartes *is a dreaming Aſs.* "It ſhall be your Fault, Madam, replied I, if "I do not prove to you, not only that your "Chaplain is a meer Ignoramus, but alſo that "*Ariſtotle*, his great Crony, is not much better." *Indeed*, ſays ſhe, *you will oblige me vaſtly in this extraordinary Undertaking; and if you once perſuade me that* Ariſtotle *knew nothing, I do not queſtion but that you will eaſily induce me to believe, that there is no ſuch thing as Knowledge amongſt Men.* "I ſhall have but little Trouble, *an-* "*ſwer'd I*, to demonſtrate to you, that they "have Certainty but in a very few Things in "the greateſt part of the Sciences they ſtudy." Well, ſaid this Lady, *I take you at your Word, and am rejoic'd to ſee you come to an Engagement with all Mankind.* "Nay, *ſaid I, Madam*, "there you are miſtaken; I ſhall have no Dif- "ference with the truly Learned: On the con- "trary, Perſons of a juſt way of Thinking, and "good Senſe will be of my ſide, and aſſiſt me "in demonſtrating to you, that moſt Men are "intirely ignorant of what they think they "know." *But pray*, ſays ſhe, *what are the Sciences, in which human Knowledge has ſo ſmall a Share?* "All thoſe, *replied I, ſmiling*, which "your Chaplain pretends to be Maſter of, *viz.* "Logic, the general Principles of Philoſophy,

"Metaphyſics,

" Metaphyſics, and Aſtrology." *I find*, ſays ſhe, *you have a ſtrange Pique againſt my poor Parſon; but I hope you will not deny him the Certainty of the Facts, that he has learned in Hiſtory.* " I muſt " beg your Pardon, *Madam*, *ſaid I*; I ſhall prove " that a great many of the Diſcoveries that he " has made in Hiſtory, are as little to be de- " pended upon as his other Acquiſitions."

This Lady thus daring me to execute my Promiſe, I reſolved to employ ſome Hours time in running over the principal Articles, whoſe Uncertainty I was to prove to her. I committed ſome of my Thoughts on theſe Subjects to Writing; and being inſenſibly drawn on by new Matters that ſtarted in my way, I wrote out the five Diſſertations, that compoſe this Work. I ſhewed them to ſome of my Friends, who were very well pleaſed with them, and engaged me to make them public; and having critically reviewed the whole Piece, I have endeavoured to render it worthy of a favourable Reception. I have had in my View to oblige two ſorts of People by this Work; the Ladies, for one of whom it was at firſt undertaken; and the truly Learned, at whoſe Tribunal all Writings ought to receive their Sentence.

The better to ſucceed in my Deſign, I have endeavoured to expreſs myſelf as clearly and intelligibly as poſſible. I have treated thoſe Subjects that were not ſuſceptible of Pleaſantry in themſelves in a leſs ſerious and abſtracted manner; and I flatter myſelf, that any Man who reads over my Book with a little Attention, will not be afraid of the pedantic Pride of an Univerſity Scholar, with all his *Greek* and *Latin*, whenever they enter into a Diſpute upon the Sciences, whoſe Uncertainty I have here demonſtrated. Yet I do not

deſire, that Ladies or Gentlemen, who ſhall read this Work, ſhould come to it with the leaſt Prejudice in favour of my Sentiments. I adviſe them, on the contrary, to put as little implicit Confidence in me, as I have put in others. Reaſon, or the Light of Nature, being the Gift of Heaven, which has been beſtowed upon us for our Guide, I intreat them to make uſe of that. This is the ſureſt way to come to the Knowledge of the Truth.

I am not without Hopes, that this Tract will be of ſome Service even to the truly Learned, though it contains nothing but what they themſelves may have ſometimes reflected upon. For, if they learn nothing new, I fancy they will think themſelves obliged to me, for having thrown into a ſingle Point of View ſo many Reaſons proper to inform Men, what Precautions they ought to take, before they give abſolute Credit to many Opinions.

I have recited, with all the Exactneſs I poſſibly could, certain Paſſages of the moſt celebrated Authors, which I take to be corroborating Proofs of my Sentiments. Thoſe who have not read much, will be obliged to me for having laid before their Eyes ſome Paſſages, which they would never have ſeen in their Originals; and for leading them through the Works of the moſt illuſtrious Writers, without having the Trouble of reconciling them together; ſo that they will often be informed of the different Opinions there are concerning one Queſtion, according as it has been handled by different Authors. The Learned will alſo find their Advantage in theſe Quotations; they will make them more ſtrongly reflect upon the Sentiments of the Writers whom I mention, and with which they may be well acquainted.

acquainted. I myſelf have received great Lights from the Paſſages I have quoted. I ſhould have been obliged many times to have weakened my Reaſon by too great a Prolixity; inſtead thereof I have made uſe of ſome Quotations, as it were, *ex Abundanti*. In ſhort, I would deſire, that thoſe, who are not thoroughly acquainted with the Sciences I ſpeak of, would read this Book at firſt without ſtopping at, and attending to the Quotations, that they may gain a general Idea of my Subject; and afterwards they may read it a ſecond time with the Remarks, and obſerve with a ſingle Caſt of the Eye, and without any Trouble, the Opinions of various Authors, in their own Terms.

As there are many People who only underſtand their Mother Tongue, I have tranſlated all the Paſſages I have quoted; and the Tranſlation will be found either in the Body of the Work, or below the Quotation. I have endeavoured to bring as little *Latin* into my Diſcourſe as poſſible, that I might not vainly amuſe ſuch Readers as do not underſtand that Language. Beſides, in a Book purpoſely made for Ladies and other Perſons of no great Learning, it was neceſſary to avoid every thing, which might embarraſs the Reader, and require too cloſe an Attention. However, as it is but reaſonable to write in ſuch a manner as to hit the Taſte of Readers of all Kinds, there being many Courtiers, Officers, Gentlemen, *&c.* who, without making any Oſtentation of their Learning, are as knowing as moſt Profeſſors, I have placed at the Bottom of the Pages, all the Paſſages that I judged would be of any uſe to thoſe of my Readers who are fond of Erudition, and are deſirous to judge of the Opinions of an Author, from the Author's own Words. With re-

gard to the Citations in *Greek*, as they are purely deſigned for the Learned, I have only inſerted thoſe that I thought abſolutely neceſſary to verify the Authority of any Paſſage, whoſe Senſe was liable to be cavilled at in the Tranſlation; as in that which I alledge out of *Diodorus Siculus*, ſome modern Writers having maintained, that the *Egyptians* believed that there was but one Supreme God, one only perfect intelligent Being, and one ſole Author of all Things.

SECT. V. *Of the Reſpect due to Philoſophers.*

I Have often Occaſion, in the Courſe of this Work, to ſpeak of Philoſophers in a manner, that may ſeem diſagreeable to ſome, and even ſhocking and dreadful to others. Some will think the Terms, I make uſe of now and then, in aſſerting the Uſeleſſneſs of ſome of the Writings of *Ariſtotle*, *Scotus*, and many of the Schoolmen, are unpardonable Blaſphemies. But I deſire thoſe that may be ſo very cenſorious, to aſſure themſelves, that when I criticize certain Faults in thoſe Authors, I have no Deſign to rob them of the Glory, which they have juſtly gained by many other Parts of their Works. Thus, in ſaying, that *Ariſtotle* was no great Natural Philoſopher, when compared with *Des Cartes* and Sir *Iſaac Newton*, I do not pretend to ſay, but that he was an extraordinary Genius and of a bright Capacity; whoſe Eſſays on Poetry are as good, as thoſe wherein he treats of Philoſophy are inſignificant. I will give you here the Portrait that Father *Malle-branche* has made of *Ariſtotle*, and the Peripatetics will ſee that I am very modeſt, in compariſon of this celebrated *French* Metaphyſician.

Ariſtotle,

Ariſtotle, *who is juſtly ſtil'd the Prince of theſe Philoſophers I am ſpeaking of, becauſe he was the Founder of this Philoſophy, which they ſo carefully cultivate, hardly ever reaſons but upon confuſed Ideas, which are received from the Senſes, and upon other vague, general and indeterminate Ideas, that convey no fixed Notion to the Mind; for the uſual Terms employed by this Philoſopher ſerve only to exhibit, in a confuſed manner, to the Senſes and Imagination, the jumbled Ideas that we have of ſenſible Things, or to make us ſpeak in a way ſo vague and indeterminate, that we can expreſs nothing properly. Almoſt all his Works, but eſpecially his eight Books of Natural Philoſophy, which have had as many Commentators, as there have been different Teachers of thoſe Sciences, are only ſo much Logic. He uſes a great many Words, but they have no Meaning; it is not that he is over copious, but that he has got the Secret of being conciſe, and expreſſing nothing but Words. In his other Works, he does not make ſuch frequent uſe of looſe and general Terms, but thoſe which he does make uſe of, only awaken the confuſed Ideas taken from the Senſes. It is by theſe Ideas, that he pretends, in his Problems and elſewhere, to ſolve in two Words a vaſt Number of Queſtions, which one may demonſtrate can never be reſolved* *.

I hope that *Ariſtotle*'s Diſciples, after having read this Paſſage of Father *Mallebranche*, will not be ſcandalized at the Criticiſms, which they will find in my Book, upon ſome of their Maſter's Opinions. I deſire alſo the *Carteſians* not to take it amiſs, if I tax them ſometimes with being a little too much attached to their Opinions, and

* *Mallebranche*'s Recherche de la Verité, Book V. Ch. II. p. 388. *Mallebranche* is not the only celebrated Philoſopher, who in theſe Times has ſpoken with Contempt of the Phyſics of *Ariſtotle*. *Locke*, *Des Cartes*, *Gaſſendus*, and before them, *Bacon*, beſides ſeveral others, have loudly condemned three Parts in four of the Opinions of this *Greek* Philoſopher.

defending them too haughtily. I flatter myſelf, they will own what I ſay to be true, before I finiſh this Diſſertation. In other Reſpects, I have as ſincere a Value for Monſieur *Des Cartes* as they themſelves. I look upon him as a Reſtorer of the true Philoſophy; but yet he was a Man, and as ſuch ſubject to the Failings of human Nature. One of his moſt zealous Diſciples allows, that there is not any of his Works, even thoſe which treat of Geometry, wherein we do not perceive ſome Marks of the Weakneſs of human Underſtanding. This, I think, may ſerve as a Juſtification to every one, after having paid all due Reſpect to *Des Cartes*'s Merit, not to deify his Errors, as ſome extravagant *Carteſians* have done.

I ſhall have fewer Excuſes to make for the *Gaſſendiſts*; for *Gaſſendus*'s Honeſty and Sincerity will not let us cry out upon the Errors, into which he may have fallen. He frankly owns, that he ſearches after Truth, and that he is perpetually liable to err. He delivers the greateſt part of his Opinions as having the Appearance of Truth. I do not take upon me to decide between the Merit of *Des Cartes* and *Gaſſendus*; but I may boldly affirm, that Poſterity will look upon them both as ſurprizing Genius's. Their Talents were very different. *Des Cartes* borrowed little or nothing from others; he had ſuch an Averſion to the peripatetic Philoſophy, that it inſpired him with a Hatred for every other Syſtem of the ancient Philoſophers. *Gaſſendus* gave the firſt Blow to *Ariſtotle*'s Philoſophy; and he ſet in its cleareſt Light, a Syſtem that had been neglected for many Ages, and gave it more Strength, and a greater Appearance of Truth, than ever it had. Time muſt determine what Succeſs the different Opinions of theſe two Philoſophers ſhall have. But

I

I am fully perſuaded, that they will find Partiſans and Diſciples in the moſt remote Poſterity, and that ten thouſand Years hence, a great many Queſtions will be canvaſſed, which they have not been able to diſcuſs.

A Deſire to diſcover Truth, and not a Fondneſs for Novelty, has determined me to prefer ſome Opinions of *Newton* to others of *Des Cartes*; for I have no Inclination to raiſe the Reputation of a Foreigner upon the Ruins of that of my own Countrymen. I cannot but ſmile at a *Frenchman*, who is fond of all *Engliſhmen* only becauſe they are *Engliſh*, and who is very zealous to deſtroy every thing that may do Honour to his Fellow Citizens: On the other hand, I utterly deſpiſe a pretended *French* Philoſopher, who thinks there is nothing praiſe-worthy out of his own Nation. The Country of a true Philoſopher is the World in general; he looks upon all Men as perfectly equal, and only to be diſtinguiſhed from each other by real Merit. I have blamed in *Newton* whatever I could not approve of, and have even made myſelf merry with ſome of his Opinions. For why ſhould not I have the ſame Privilege over the Opinions of an *Engliſhman* as thoſe of a *Frenchman?* Is it becauſe the *Newtonians* think themſelves as infallible as the *Carteſians*, and that they have at leaſt as good an Opinion of themſelves as their Adverſaries? *Newton* was as great a Man as Nature ever produced; but his moſt famous Diſciples have acknowledged, that he is ſometimes miſtaken, and ſpeak of him in the ſame Language as *Mallebranche* of *Des Cartes*. We have therefore the ſame right over theſe two famous Philoſophers, and we may equally, provided it is with due Reſpect, reject the Errors which we perceive in any of their Opinions. I ſhall always acknowledge

ledge, that *Newton*, was the greateſt Man of the preſent Age; but I ſhall likewiſe affirm, that he was ſubject to the Weakneſſes of human Nature, and I ſhall laugh at thoſe, who, not contented with giving him the Infallibility of a Pope, endeavour to raiſe him to the Rank of a God.

In my Diſſertations, I have often quoted Mr. *Locke*, who is generally true in his Principles, juſt in his Conſequences, and exact in his Demonſtrations. I own, that if I were obliged to take one ſide in Philoſophy, and ſtand by it, I would immediately liſt myſelf under the Banner of this great Man. But ſeeing it is not in the Republic of Learning, as in other States, and that every Perſon therein may form a kind of Sovereignty, I intend only to reſpect, and not to idolize, even the greateſt of Men; and this Reſolution authoriſes me to ſay freely what I think concerning the fifth Chapter of the third Part of the ſecond Book of Father *Mallebranche's Enquiry after Truth.*

SECT. VI. *A Criticiſm of the fifth Chapter of the third Part of the ſecond Book of* Mallebranche's Recherche de la Verité *againſt* Montagne.

HOW great Eſteem ſoever F. *Mallebranche* may deſerve, and whatever Reputation he may have gotten in the Republic of Learning, I do not believe that his moſt zealous Abettors would perſuade Men, that he ought to have that Infallibility conferred upon him, that his Brethren have refuſed to grant the Pope. And certainly, I think, all learned Men, and ſuch as are true Lovers of Erudition, are as much intereſted in maintaining their Independance and Liberty, as the Parliaments and Biſhops of *France* are in ſupporting

porting the Privileges of the *Gallican* Church. Thus after having rendered Juſtice to F. *Mallebranche*'s Merit, after having ſaid that he is a Philoſopher of the firſt Claſs, that he has a noble, vaſt, and penetrating Genius, I ſhall add, that he has miſerably criticiſed upon *Michael Montagne*'s Eſſays. The Term miſerably will be thought affrontive by many People; but it is ſo perfectly juſt and true, that I cannot in Juſtice retract it. Father *Mallebranche* is not the only Perſon, who has attacked *Montagne*. All the *Janſeniſts* to a Man are againſt him. His Works ought to be as good as they are, to withſtand ſo many reiterated Criticiſms. The Devotees of *Port-Royal* have not only * fallen foul upon his Writings, but his Perſon alſo. I am aſtoniſhed, that Men, whoſe Vanity aims only at the Eminency of Popes and Biſhops, could amuſe themſelves with blackening the Reputation of a private Perſon. Certainly, theſe devout Anchorets to demoliſh *Montagne*, choſe ſome ſuch Moments, as they employ in reading of *Clelia* the Romance, in which they are exceſſively commended †, and which they place in

* In a Book intitled *L'Art de Penſer. The following is a Specimen of the Invectives of theſe four Devotees.* Pyrrhoniſm *is not a Sect of People who are perſuaded that what they ſay is true; but it is a Sect of Lyars: for which reaſon they often contradi themſelves in declaring their Opinion, their Heart not agreeing with their Tongue, as may be ſeen in* Montagne, *who has endeavoured to revive it in the preceeding Century.* The Book from whence this Quotation was taken, was compoſed by two or three Anchorets of *Port-Royal*, and principally by Mr. *Nicole*.

† Theſe Devotees were praiſed therein under borrowed Names. The famous *Racine* has rallied them with great Vivacity on this Account, in one of the two Letters which he wrote againſt them in Defence of *Deſmaretz*. Theſe two Letters have been reprinted in the laſt Editions of *Deſpreaux*'s Works. You did not conſider, ſays Mr. *Racine*, that neither Mr. *D'Urſey*, nor *Corneille*, nor *Comberville* your old Friend, were reſponſible for the Conduct of *Deſmaretz*.

in their Libraries near to the Eunuch of *Terence*, which they have tranſlated into *French* *, to purify the Morals of young People by the reading thereof. Father *Mallebranche*, born and bred in the Notions of *Port-Royal*, diſcharges his Choler alſo upon *Montagne*; and he neither ſpares his Perſon nor his Writings. I cannot imagine how ſuch an enlightened Philoſopher as he is, who ſanctifies every Page of his Books with pious Reflections, did not conſider what a mean thing it was to make ſuch a rude Attack upon a Gentleman,

marets. You have involved them in his Diſgrace; you have even forgot that Mademoiſelle *Scuderi* has given an advantageous Painting of *Port-Royal* in her *Clelia*. Nevertheleſs I have heard ſay, that you patiently ſuffered yourſelves to be praiſed in that ſhocking Book. The Volume which mentions you was ſent for by way of Entertainment, and was handed from one Member to another, becauſe the whole Society was deſirous of ſeeing the Part which ſpoke of them with ſo much Honour. Have not they even rendered back the Praiſes in one of their Provincial Letters, and is not it her the Author means, when he ſpeaks of a Perſon that he admires without knowing her? *Boileau*'s Works, Vol. IV. p. 197. *Amſterdam* Edition, 1729.

* Theſe Gentlemen have alſo tranſlated the other five Comedies of *Terence*. Mr. *Racine* has farther illuſtrated this Fact in the ſame Letter which I have juſt quoted; this is what he ſays on this Subject. I well know that St. *Auguſtine* blames himſelf for being affected at a Play, and for having wept in reading *Virgil*. What do you conclude from thence? Will you ſay it was unlawful to read *Virgil*, or to be preſent at the acting of a Play? But St. *Auguſtine* accuſes himſelf of being too well pleaſed with the Singing at Church; muſt we therefore abſtain from going to Church? And as for you who are this Father's Succeſſors, to what end did you tranſlate the Comedies of *Terence* into *French*? Was it neceſſary to interrupt your holy Employment for the Sake of tranſlating Plays? However, if you have done them with all their original Beauties the Publick will be under an Obligation to you for the Pains you have taken. Perhaps you will ſay, you have retrenched certain Expreſſions. But you likewiſe affirm, that the Care which is taken to cover the Paſſions with a Veil of Decency only, ſerves to make them more dangerous. Thus you have placed yourſelves in the Rank of Corruptors. *Boileau*'s Works, Vol. IV. p. 196.

man, who was not in a Capacity to defend himſelf. But the ridiculous Part of the Story is, that Father *Mallebranche*, in refuting *Montagne*, commits thoſe very Faults that he reproaches him withal. He at firſt gives you a long Detail of the Properties of Pedantry, which he attributes to this Author, who, in the Judgment of Perſons of good Senſe, is of all Writers the moſt diſtant from that Fault; however, by the Power of Diviſions and Sub-diviſions, and by ſifting the Attributes of a Pedant, in the ſame abſtract Manner, that he does the Ideas, by which we ſee all Things in God*, he concludes that *Montagne rather ſhews himſelf to be a Pedant à la Cavaliere, a Pedant of a particular Species, than a reaſonable, judicious, and honeſt Man*; this laſt Epithet carries the groſſeſt Affront along with it; for he that is not an honeſt Man is a Raſcal †. But, paſſing by theſe Invectives, let us ſee upon what Account Father *Mallebranche* ſo boldly condemns *Montagne*. *Pedants*, ſays he, *are vain, haughty, of a great Memory and little Judgment, powerful in Quotations, but unfortunate and weak in Reaſon*, &c. If this Picture be not at all like *Montagne*, then we muſt allow that he is no Pedant. Let us examine this Queſtion without Prejudice.

Montagne is accuſed *of having made his Book, with a View only to paint himſelf, and to repreſent his own Humours and Inclinations.* It is true, *Montagne* writ as a diſintereſted Man, and a Gentleman ought to write, for his own Pleaſure and private Advantage. But, conſidering afterwards, that the Public might receive ſome Benefit from his Labours, he publiſhed them juſt as they were, and did not think it neceſſary to ſet up for a Preacher

* Recherche de la Verité, Part I. Book III. Chap. VI.
† Part III. Book II. Chap. V.

Preacher to Mankind. He thought it ſufficient to inſtruct and amuſe them at the ſame time. If he had been only deſirous of obtruding a few muſty Morals upon the World, he would have compos'd his *Eſſays* in the manner *Nicole* has done. *Montagne* is alſo reproached *with ſpeaking of himſelf in almoſt every Chapter.* This he does indeed in ſuch a Strain of Sincerity, that one may eaſily ſee, it is more for his Reader's Inſtruction than out of Vanity. *It is certain,* ſays M. *Coſte, that his Writings are ſo good a Looking-Glaſs, that all Men may ſee themſelves therein, if they will be at the pains to view themſelves with Attention, and with a Deſign to ſee themſelves ſuch as they really are.*

Mr. *Paſcal,* a good and faithful Advocate for *Port-Royal,* had cenſured *Montagne* in the ſame Strain as *Mallebranche.* The following is his Criticiſm*, and the Anſwer which an ingenious Writer made thereto.

Let us examine *Montagne*'s Pedantry a little further; he is blamed for having mixed ſo many Quotations with his Arguments, as if he thought them

* The ſilly Project which *Montagne* had conceived of painting himſelf, and this not by the by, had, contrary to his own Maxims, a Frailty which moſt Writers fall into, but in Purſuance of his avowed Deſign, which was his chief and principal Intention. For to ſay fooliſh Things by Chance and through Weakneſs, is a common Diſeaſe; but to do it deſignedly is an inſupportable Fault. "The Project was charming which *Montagne* had conceiv'd of painting himſelf to the Life as he has done. For he has painted human Nature, and it was a low Deſign of *Nicole, Mallebranche, Paſcal,* to diſparage *Montagne* on that Account." *Voltaire* is in the right of it; and if *Paſcal* had not ſucceeded better in his Provincial Letters than in his Criticiſm on the Writings of *Montagne,* the Jeſuits would have been greatly to blame to give themſelves the Trouble of an Anſwer. His Reaſonings are ſo weak, that it is doing them too much Honour to give them a ſerious Confutation. *Voltaire*'s Works, Vol. IV. p. 366. *Amſterdam* Edition 1739.

them ſo many demonſtrative Reaſons. I can eaſily confute this Cenſure. *Montagne* relates the Paſſages of the various Authors he quotes, only to give the Reader at one Glance, the Pleaſure of ſeeing the Sentiment he advances with that of the Author he copies after. He had a mind to preſent to the Imagination his own Riches, and the Mines from whence he dug them. But how comes it to paſs, that Father *Mallebranche* exclaims ſo much againſt *the Quotations that* Montagne *made uſe of inſtead of Reaſon?* He, I ſay, who attempts to prove out of the *Apocalypſe*, that that Writer did very ill to be vain. Nothing can be more merry than that Paſſage, and the Place where he brings it in augments the Drollery of it. Father *Mallebranche*, after having made a long Detail of the uſeleſs Knowledge of Pedants, *their Affectation for Quotations, and their vigorous and ſpacious Imagination*, and having been free of his ill Language againſt *Montagne*, all of a ſudden, by an Effect of this ſame *vigorous and ſpacious Imagination*, which he had been ſpeaking of, he gives a looſe to his Carreer; and having ſaid, *that this Writer muſt needs look upon himſelf as an extraordinary Perſon*, he reaſons thus upon it:

All Creatures are under an indiſpenſable Obligation to direct the Minds of ſuch as would worſhip them towards him alone, who deſerves to be worſhipped. And Religion teaches us, that we ought never to permit the Mind and Heart of Man, which is God's Right only, to employ itſelf about us, to admire and love us. When St. John *threw himſelf at the Feet of the Angel of the Lord, the Angel forbad him to worſhip him.* I am, *ſaid he to him*, a Servant, as well as thou and thy Brethren; worſhip God. *Conſervus tuus ſum*, &c. *Deum adora*, Revel. i. 9, 10. *It is only the Devils, and ſuch*

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as partake of the Pride of Devils, that take Pleaſure in being worſhipped. And this Deſire of being worſhipped is not an exterior and apparent Act of Adoration, but an inward and real Adoration, that other Men might take up their Minds about us. This is a deſiring to be worſhipped, as God will be worſhipped, to wit, in Spirit and in Truth.

What, in the Name of Wonder, would Father *Mallebranche* have ſaid, if to prove that a Man was guilty of Vanity, *Montagne* had, all of a ſudden, made an Excurſion into the moſt abſtruſe Theology; had expatiated upon the Obligations of the Creature towards the Creator; had diſtinguiſhed the Modes of Adoration by *exterior*, *apparent*, *inward* and *real*, had determined that *God will be worſhipped in Spirit and Truth*, had quoted St. *John*, *the Apocalypſe*, *Apoſtles and Angels*; and all this becauſe *an Author had made a Book only to paint himſelf, and ſet forth his own Humours and Inclinations?* For this is the Upſhot of Father *Mallebranche*'s Reaſoning, after having enjoyed the Privilege of that *vigorous and ſpacious Imagination*, that he allows *Montagne* and the reſt of the Pedants.

Father *Mallebranche* had reaſon to deſire the charming Erudition of *Montagne*, for nobody had ever leſs Taſte than he for what is called polite Learning. Mr. *Fontenelle* informs us, that he had little Eſteem for that kind of Literature, which conſiſts in enquiring after the Sentiments of different Philoſophers, and that he could never read ten Lines together without Diſtaſte. I ſhall make *en paſſant* two Reflections: The firſt is, that the only good Method of ſtudying is that of examining carefully the Opinions of great Men who lived in former Times. Thus we have an equal Advantage from the Truths which they knew, and the

the Errors into which they fell: We adopt the former and reject the latter; every thing is uſeful that we read in ancient Authors, for it is partly owing to a Knowledge of their Faults, that we have made the greateſt Part of the Diſcoveries which we have acquired. Without the reading of *Greek* and *Latin* Books, *Gaſſendus* had never publiſhed his Works: *Locke* is greatly obliged to the Ancients; and *Leibnitz* acknowledges *, that he owes a great deal to *Ariſtotle*. *Fontenelle* is greatly deceived, when attempting to excuſe the wretched Taſte of *Mallebranche*, he ſays † that one may know the Hiſtory of Mens Thoughts without Thinking. On the contrary I am perſauded, that it is impoſſible that a Man who has ſtudied Nature in its moſt beautiful Productions, that is to ſay, in the greateſt Genius's which have lived in every Age, and whoſe Mind is nouriſhed with all that is good in their excellent Works, ſhould not have an infinite Advantage to think juſt rather than another, who has had no other Maſter and Guide than his own Genius. I ſhall take Occaſion to treat of this Matter more at large in another Work; and therefore I paſs on to the ſecond Reflection.

However ſmall the Taſte *Mallebranche* had for Erudition, he was ſometime deſirous of putting it into his Works; but it may be juſtly doubted, if his Deſign was not to diſguſt his Readers by the Manner he makes uſe thereof. For Inſtance, to prove that the *Gaſcons*, the *Picards* and the *Normans*, greatly differ as to their Character and Diſpoſition,

* Quare diſcere non vereor plura me probare in Libris *Ariſtotelis* quam in meditationibus *Carteſii* tantum abeſt at *Carteſianus* ſim. L. E. B. N. Epiſt. Tom. 2. p. 124. Epiſt. XIV.

† Elog. des Academ. Tom. I. p. 343. Elog. de *Mallebranche*.

Diſpoſition, he quotes the Bible *, *Cicero*, *Martial*, *Horace*, &c. do not you think his Learning was well employed, eſpecially as to the Queſtion in hand? For that which *Mallebranche* intended to prove is notoriouſly falſe, that Climate in general having no Influence upon the Genius: Its an old Error to maintain the contrary; an Error, which is diſproved by daily Experience; *Holland*, *Germany*, *England* having produced Perſons of as lively an Imagination, as that of the moſt ingenious *Italians* and *French*. Can we find more Fire, more Vivacity, more Invention than in the Works of *Milton* and *Leibnitz*? Had *Des Cartes* and *Taſſo* a greater Imagination than theſe two Men born in very different Climates. The Ancients had Examples as ſtriking, as we have in the preſent Age. *Democritus* was a Native of *Abdera*; and *Greece* never had a Genius more extenſive than his; and his Syſtem of Philoſophy is a ſufficient Proof of the Vivacity of his Imagination.

If *Mallebranche* had thought proper to have ſtudied the ancient Philoſophers with Attention, he

* We every Day perceive the Truth of this Aſſertion by the various Humours and different Characters of Mind in Perſons of different Countries. The *Gaſcons*, for inſtance, have a more lively Imagination than the *Normans*. The Inhabitants of *Rouen* and *Dieppe*, and the *Picards* differ from each other; but more eſpecially the People of *Low Normandy*, though they live ſo near each other. But if we conſider Men who live in the more diſtant Countries, we ſhall meet with Differences ſtill more ſtrange; ſuppoſe an *Italian*, a *Fleming*, or a *Dutchman*. In ſhort, there are Places which have been always famous for the Wiſdom of their Inhabitants, as *Theman* and *Athens*; and others for their Stupidity, as *Thebes*, *Abdera*, and ſome others.

Athenis tenue coelum, ex quo acutiores etiam putantur Attici, craſſum Thebis. Cic. *de Fato.*

Abderitanæ pectora plebis habes. Mart.

Boeſtum in craſſo jurares aere natum. Hor.

Nunquid non ultra eſt Sapientia in Theman? Jerem. *c.* 49. *v.* 7.

Recherche de la Verité, *Lib.* II. *Chap.* III. *p.* 135. *Tom.* I. *Edit. in* 12*mo.*

he would have avoided the Oſtentation of Learning merely to maintain an Error. Beſides, if he could have read the Works of the beſt Poets without Diſtaſte, he would not have cited *Plautus* *, to prove that Wine gives a Man a Fall, and that *Horace* had indiſcreetly wrote in Praiſe of Drunkenneſs. A little more Juſtneſs in the Application of Paſſages had been more ſuitable to the Work of a Man who treats an Author with ſo much Contempt, who made uſe of Extracts from ancient Authors with the greateſt Delicacy, and who almoſt always adds a new Grace to their Thoughts.

Mallebranche reproaches *Montagne* alſo with *contradicting himſelf every Moment, and in the ſame Chapter, even when he ſpeaks of Things that he pretends to know the beſt.* For *Montagne*'s Juſtification, I will only recite what Father *Mallebranche* ſays, a few Lines after this Piece of Criticiſm. *They who have read* Montagne *know that he affected to be thought a* Pyrrhonian, *and that he gloried in doubting of every thing.* I aſk if any has a Right to take it amiſs, that a Perſon, who is in doubt, ſhould appear doubtful? And whether or no it is a Fault in him, who ſearches after Truth, to weigh

* Wine is ſo ſpirituous, that it yields animal Spirits almoſt ready made; but Spirits that are a little unruly, and that will not yield to the Direction of the Will, on Account of their Solidity and exceſſive Agitation. Thus in Men of the ſtrongeſt and moſt vigorous Conſtitutions, it produces the greater Changes in the Imagination, and in all Parts of the Body, than Meats and Drinks of another Kind. *It gives a Man a Fall, Vinum luctator dejoſus eſt* as *Plautus* ſays, it produces in the Mind many Effects, which are not ſo advantageous as thoſe which *Horace* deſcribes in the following Lines,

Quid non ebrietas deſignat? operta recludit:
Spe, jubet eſſe ratas: in prælia trudit inermem:
Sollicitis animis onus eximit: addocet artes.
Fœcundi calices quem non fecere diſertum?
Concracta quem non in paupertate ſolutum?

Recherche de la Verité, *Liv.* II. *Chap.* II. *p.* 153.

weigh his Opinions, and examine the Sentiments of others, before he comes to a Determination, and adopts any of them for his own? For it is to this prudent Precaution that *Montagne*'s *Pyrrhoniſm* is reduced. All the World may be ſatisfied of this, by reading his Works. And a Man muſt be blinded with Paſſion, or of diſhoneſt Principles to aſſert, that *Montagne* ever held the ridiculous Opinion of the ancient *Pyrrhonians*. Is it to bring Philoſophy to the ſingle Point of doubting of every thing, to ſay, that *ſhe inſtructs us in all Things, and that Infancy learns ſomething from her as well as thoſe of riper Age* *? Is it to be certain of nothing, to affirm, that Philoſophy makes us virtuous, and that Virtue is the chiefeſt Good? *Knowledge*, ſays *Montagne*, *propoſes Virtue for its End, which is not, according to the Schoolmen, fixed at the Top of a ſteep, rough and inacceſſible Mountain. They, who draw near to her, may lay hold on her as they pleaſe; ſhe is placed in a fine, fruitful, and flowery Plain, from whence ſhe views whatever ſurrounds her* †.

Can this be called Doubting? I think it is rather admitting the Neceſſity of Truth eſſential to the Good of the Publick. But I am ſenſible what the Doubts are, that offend Father *Mallebranche*. Nay, he himſelf tells us what they are in theſe Words, *What can one think of a Man who confounds Spirit and Matter? Who relates the moſt extravagant Opinions of the ancient Philoſophers, concerning the Nature of the Soul, without contemning them — who does not ſee the Neceſſity of the Immortality of our Souls; who thinks that human Reaſon cannot be certain of it?* Theſe are the principal Queſtions, that Father *Mallebranche* would have had

* *Montagne*'s Eſſays, Book I. Chap. XXV. p. 281.
† *Montagne*'s Eſſays, p. 278.

had *Montagne* peremptorily decided. As for me, I own, that I commend him for having acted with Sincerity, and confeſſing frankly, he could not clearly comprehend that which is incomprehenſible. I refer my Reader to my fourth Diſſertation upon Metaphyſics, to ſee if the Queſtions be ſo evident as Father *Mallebranche* ſay they are; and if the Proofs which he has given thereof, be as clear and convincing as he pretends they are.

Philoſophical Diſſertations,

Concerning the UNCERTAINTY of

HUMAN SCIENCES.

DISSERTATION I.

Of the Uncertainty of HISTORY.

SECT. I. *The* INTRODUCTION.

YOU believe, Madam, that I am in a great Concern, how I ſhall prove to you demonſtratively the Opinion, that you have often heard me maintain; *That we have little Certainty even of thoſe Things, which we think we are the moſt aſſured of.* You imagine that it will be difficult for me to keep the Promiſe I made, *to teach you in eight Days Time as much Philoſophy as the Profeſſors in all the Colleges of* Paris *underſtand.* You tax my Project with Ignorance and Vanity. But I ſet too high a Value upon your good Graces, not to endeavour at leaſt to make good my Promiſes. Perhaps, I might have deſired ſome Weeks time from a Lady of leſs Penetration than you

are; but your Underſtanding is ſo ready and exact and we really know ſo few Things, that indeed when I demanded eight Days to make you a ſkilful as a Profeſſor, I might have ſaid, as the moſt accompliſhed Doctor of the *Sorbonne*, and ſhall have very eaſily kept my Word.

You know, Madam, that the Philoſophy we ſpoke of at that time did not turn upon certain Branches of the Mathematics, as Geometry, Aſtronomy, Algebra, and other Sciences, whoſe principal Operations are demonſtrable by arithmetical Calculations and certain Rules. Our Theſis extended only to the little Advantage of Logic, the Uncertainty of that part of Natural Philoſophy, which is not confirmed by Experiments, and the obſcure and impenetrable Depth of Metaphyſics. The Rev. Father *Bonavanture* aſſured you that the Study of twenty Years together would hardly be ſufficient to attain the firſt Rudiments of thoſe Sciences; ſo that a Man muſt ſtudy twenty Years under a Preceptor, and twenty more in his Cloſet, to acquire the Character of an Adept. But indeed this is really tormenting one's ſelf for the Space of forty Years, to be as ignorant at laſt, as the firſt Day of Study. You know, Madam, what Diſputes we had upon theſe Subjects with that reverend Father. He pretended to be ignorant of nothing; and I maintained, that Men know very little; and that, what they know thoroughly, all are capable of knowing. Upon this the good Father had Recourſe to learned Terms, which you looked upon as a Proof of what he had advanced; but ſince the reading of *Montagne's Eſſays*, ſome Pieces of *Bayle*, and ſome of *Mathe le Vayer's Writings* have, as you tell me, made my Opinion a little more plauſible to you, I ſhall now

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endeavour to convince you fully of the Truth of it.

I know that you like the Authorities of celebrated Writers; and that when the Reverend Father *Bonavanture* cited *Ariſtotle*, or *St. Thomas*, you ſeemed as much in favour of his Sentiments, as if he had convinced you of them by Demonſtration. To pleaſure you therefore, I ſhall occaſionally make uſe of ſome Paſſages of the beſt Authors, which I ſhall take care to tranſlate, that you may judge of them yourſelf; I will alſo add, the *Greek* and *Latin* at the Bottom of the Page, that if you think I do not act fairly, you may apply to ſome learned Perſon, who may eaſily compare my Tranſlations with the Originals. But yet, I ſhall never quote Authorities to convince you of the Truth of an Opinion. It is by Reaſons that I will prove to you the Facts that I advance; and it is by your Reaſon only, that I deſire you to judge of what I ſay. The only thing that I demand of you is, not to have a greater Regard for *Ariſtotle* and *Des Cartes*, when they oppoſe evident Truths than *Boileau* had for *Cotin* and *Pradon*.

The Reſpect that is due to great Men ought not to lead us into Slavery. We ought to commend them wherein they do well, and have a venerable Eſteem for their Writings; but we ought not to foſter their Errors. Nay, in thoſe Places, where they are evidently faulty, we ought to have no regard to their Sentiments; if they had had the Weakneſs, not to condemn the Faults of the great Men, who lived before them, they had never raiſed themſelves to the pitch of Eſteem they now are in, nor even ever equalled them.

SECT. II. *That our Reaſon cannot deceive us in Things, that we ſee diſtinctly; and that it ought to have the Preference to all Authorities.*

WE muſt firſt lay down this Maxim, that our Reaſon, which is a Gift that God has beſtowed upon us for our Conduct, cannot deceive us in Things, that it ſees diſtinctly and evidently. * For if this diſcerning, and Faculty of framing, Ideas deceive us, God himſelf would be a Deceiver, for repreſenting Falſhood to us under the Appearance of Truth. Our Reaſon would be no longer of any Service to us; it would be a pernicious Gift, tending rather to lead us aſtray than conduct us right †. Now you are well aſſured, Madam, that God cannot deceive us; Deceit and Injuſtice are Attributes unworthy of an abſolutely perfect Being. It is certain then, that Reaſon, or the Faculty of Underſtanding, which we received at our Birth, apprehends no Object but what is true, ſo far as it apprehends it clearly and diſtinctly. Every Authority, every Example which may be objected to us, we have a right to reject as Fables, whenever we ſee they are contrary to this Light of Nature;

and

* The Faculty, which he (God) has beſtowed upon us, which we call the Light of Nature, never apprehends any Object but it is true, ſo far as it is apprehended; that is to ſay, ſo far as it is known clearly and diſtinctly. For we ſhould have reaſon to believe, that God were a Deceiver, if he had beſtowed it upon us ſuch as that thereby we might take Falſhood for Truth, when we make a right Uſe thereof.

Des Cartes Prin. of Philoſ. Part I. p. 22.

† Our Reaſon is the Gift of God, which cannot deceive us. It is a Preſent which he has made us, as a Means whereby we may know him and ſerve him. If this Reaſon ſhould miſlead us, in Things that are plain and eaſy, God would deceive us, which cannot poſſibly be maintained, God being the Truth himſelf.

Jewiſh Letters, Let. 33. p. 1

and if we examine them with Attention, we ſhall eaſily diſcover their Abſurdity.

To aſſert the contrary, is to fall into the moſt extravagant *Pyrrhoniſm*. When we admit that our Reaſon is an *Ignis Fatuus*, only intended to lead us aſtray, we give an Inlet to all kinds of the moſt monſtrous Errors; there will be no Opinion but what may be defended. What muſt the Condition of Mankind be, if they have no certain Method of diſtinguiſhing Falſhood from the moſt evident Truths? The Brute Creation would be more happy, ſince they will find in their Inſtinct Reſources which Reaſon denies to Mankind. The moſt famous Philoſophers of theſe latter Times, I mean thoſe that have leaned moſt towards *Pyrrhoniſm* have however owned, that Man has in himſelf the means of diſcovering Truth; *Gaſſendus* has eſtabliſhed three Methods in his Philoſophy. Whatever Pleaſure *Bayle* may have taken in furniſhing the *Pyrrhonians* with Weapons, it is evident that his Deſign was not to maintain, that Man could not diſtinguiſh Truth from Falſhood, when he made uſe of his Reaſon. It is not Reaſon that deceives us, but the manner of uſing it, as an Author has well obſerved, who is ranked among the modern *Pyrrhonians* that is among the ſage Philoſophers, who determine nothing but what they certainly know. We muſt therefore always conſult our Reaſon as well as Authority.

Whatever are the Authorities, whatever are the Examples that are alledged, we have a Right to reject them as fabulous, when we find them contradictory to our natural Light; and if we examine them attentively, we ſhall readily perceive their Abſurdity.

The greateſt Part of Men's Opinions are founded, either upon Hiſtory, or Tradition, or the Au-

thority of the Learned; there are very few of them, that can be ſupported but by Reaſon. Before we advance any further, and to ſhew you the Neceſſity we are under, not to embrace or believe any Opinions to be true, only ſo far as they are conformable to the Light of Nature, I will examine, by your leave, into the Uncertainty, which reigns in all other Things, upon which we can ground them.

SECT. III. *Of the Uncertainty of Hiſtory in a great Number of Facts.*

HISTORY, which we look upon as the Regiſter of Events in paſt Ages, ought not to be taken for the Proof of a Fact that appears to be contrary to Reaſon. All that we have to do is to grant, that a famous Hiſtorian, who has recited an Event contrary to the Notions of Truth and Reaſon, thought fit to accommodate himſelf to the Prejudices, and Errors of the People amongſt whom he lived, or was obliged to ſwim with the Torrent of Superſtition and popular Opinions.

They who write Hiſtory cannot well avoid ſometimes reporting Facts, whoſe Falſity they are ſure of; it is not in their Power to ſuppreſs them. * It is the Province of a Philoſopher to diſcuſs the Truth of an Opinion; the Hiſtorian is not to engage in the Controverſy; all that is required of

* When *Tacitus* relates any Miracle, he follows the Example and Duty of all good Hiſtorians. They are the Regiſters of important Events. Among public Accidents we alſo reckon popular Reports and Opinions. It is their Buſineſs to recite common Rumours and Notions, not to correct them. This belongs to Divines and Philoſophers, the Directors of Conſciences.

Montagne's Eſſays, Book II. Chap. VIII.

of him is, to intimate that there is little or no Credit to be given to ſuch Reports.

There are very few Hiſtorians who religiouſly obſerve this Rule; the generality of them, after having roundly aſſerted a great Number of falſe or ridiculous Facts, ſtart a doubt concerning ſome of them, of little or no Conſequence, and ſo much the more pernicious to their Readers, as their Aſſurance on this Occaſion ſeems to authorize the Lyes, which they have approved *.

To convince you, Madam, what Uncertainty reigns in Hiſtory, I am going now to let you ſee. 1*ſt*, The Obſcurity with which it is ſurrounded in its Beginnings. 2*d*, The Partiality, which is in Hiſtorians, that lived near our own time. 3*d*, How Hiſtorians have been fond of embelliſhing their Works with Stories of Prodigies, Miracles and ſupernatural Events. 4*th*, The Contrariety of Opinions amongſt Hiſtorians of different Nations and Religions. 5*th*, The Ridiculouſneſs of the Annals of all the different Orders of Monks: And 6*th*, I ſhall requeſt you to conſider, how much the true Cauſes of an Event are often unknown to Hiſtorians.

SECT. IV. *Of the Uncertainty of Hiſtory in the firſt Ages of the World.*

THE Hiſtory of the firſt Ages of the World is ſo obſcure; and that little of it, which is conveyed down to us, is ſo mixed with Fables, which evidently contradict Reaſon, that we cannot, if we follow the Light of our Underſtandings,

† *Illi cum multa mentiti ſunt ad arbitrium ſuum, unam aliquam rem nolunt ſpondere; ſed adjiciunt, penes auctores fides erit.*

Senec. *Natur. Quaeſt. Lib.* IV. *Cap.* III.

ings, admit one half of the Facts to be true, which are related therein. We have not any Notion of what happened in the World before *Noah*'s Flood, except in the Books of *Moſes*; for if we ſhould conſult the other Hiſtorians, who can inform us of the moſt ancient Times, and if we ſhould believe the *Chineſe* or *Egyptian* Annals, we ſhould be obliged to reject the Book of *Geneſis* as Apocryphal, ſeeing the Writers of thoſe Nations place the Beginning of their Hiſtory ſome thouſands of * Years before the *Moſaic* Creation of

* The *Chineſe* Hiſtorians take it for Matter of Fact, that *Fohi* their firſt King, began to reign 2982 Years before the Birth of *Jeſus Chriſt*; which makes the Foundation of their Empire to be above 300 Years before the Flood. *Langlet*'s Method of Studying Hiſtory in his *Cartons retranchés & conſervez, dans Beyeri Memoriæ-biſtorico-criticæ Librorum rariorum.* p. 171.

Pere Dubalde ſpeaks of this in a different manner in his Hiſtory of *China*; but could he do otherwiſe? He was a Jeſuit, and conſequently obliged not to declare his own Sentiments. Beſides, if he had explained himſelf as ſincerely as Abbe *Langlet*, they would have expunged out of his Book, what he had ſaid upon that Subject, as they actually did in that of Abbe *Langlet*. However, it is evident, that *Dubald* places the Reign of *Fohi* about 200 Years after the Deluge, and he cannot deny there were other Emperors which reigned before him. Perhaps you will be glad to ſee how the Jeſuit has treated this thorny Affair. The moſt famous Hiſtorians, diſtinguiſh in the *Chineſe* Chronology, that which is manifeſtly fabulous, that which is doubtful and uncertain, and that which is paſt all manner of doubt. Thus adhering only to that which appears to have ſome Foundation, they lay down as a certain Rule, that we ſhould utterly neglect the Ages preceding *Fohi*, as being uncertain; that is, which they cannot rank, according to exact and true Chronology, and that what preceded *Fohi*, ſhould paſs for Mythological. Theſe Authors look upon *Fohi* as the Founder of their Monarchy, who about 200 Years after the Deluge, according to the Septuagint Verſion, reigned at firſt near the Confines of the Province of *Chenſi*, afterwards in the Province of *Honan*, which is ſituated almoſt in the middle of the Empire; afterwards it extended itſelf over the Land, which reaches to the Oriental Sea. This is the Opinion of almoſt all the Learned, and this Chronology, founded upon conſtant Tradition, and eſtabliſhed in their moſt ancient Hiſtories, which could not be altered

of the World; our religious Belief of the Holy Scriptures prevents our ſtrict Enquiry into that Affair. Thus of all that paſſed before the Deluge, we only know what *Moſes* teaches us, and that is but a very little. When he ſpeaks of the Creation of Man, or the Founding of Empires, it is always with regard to the *Jews*. He makes no mention of any thing, but what ſome way or other ſerves to illuſtrate the Affairs of that People *. He takes no notice of the Riſe of the *Egyptians*, *Ethiopians*, and *Chineſe*. And yet we have Fragments of their Hiſtory, which were not invented to ſerve a Purpoſe, and whoſe Truth may be depended upon †. But there is reaſon to believe, that every Nation has had its *Moſes* (pardon me

tered by Foreigners, is looked upon by Men of Letters as inconteſtible. Other *Chineſe* Authors place the Beginning of their Monarchy, at the Reign of *Yabo*, who, according to the former Opinion, is their fifth Emperor: But if any one ſhould think proper to make the Bounds ſtill later, he would not only be looked upon, as a ridiculous Perſon, but would expoſe himſelf to ſevere Chaſtiſement, and be even puniſhed with Death. It would be ſufficient for the Miſſionaries, if they were known to ſuſpect the Truth of this Matter, if it was afterwards known, to be baniſhed from the Empire.

Hiſtory of *China*, Tom. II. page 2.

* The Scripture omits every thing that does not tend to illuſtrate the favorite Nation. Will any one ſay therefore, that there was no other People but that. *Moſes* indeed paſſes by the Origin of the *Egyptians*, *Ethiopians*, *Scythians* and *Chineſe*. Yet none will dare to ſay, that the unconteſted Fragments, which are ſtill extant of their Hiſtory are Fables of later Date, invented to give theſe Nations a Repute amongſt Mankind.

Lenglet, ubi ſupra.

† If we allow, my dear Eunuch, of the Truth of thoſe Hiſtories, which make mention of what the Kings of *Egypt* did before the Flood, what Reaſon have we to doubt of the Fragments of *Manetho*, the *Egyptian* Prieſt? Or of the Genealogy and Succeſſion of the Kings of *Egypt*, which we have in *Herodotus*? Or of their Chronology explained by *Diodorus Siculus*, which carries the Reign of the *Egyptians* above a thouſand Years beyond all other ancient Epochas of the Creation, excepting thoſe of the *Aſſyrians*, *Chineſe* and *Indians*, which have ſtill a greater Antiquity. *Marana*, a Spy in the Courts of Chriſtian Princes, Tom. IV. Letter 46.

for ſpeaking of him here as a meer Hiſtorian) who had a mind to do Honour to the People he belonged to, without intereſting himſelf in the Reputation of others. Though we now had the Records of Antiquity which are loſt, they would be of little Service for our Information; we could make no more uſe of them, than we do of the *Chineſe* Annals, the Fragments which remains in *Herodotus* * and *Diodorus Siculus* †; and as, without doubt, they would not accord with the Book of *Geneſis*, and the reſt of the Holy Scriptures, the Chriſtian Faith would not permit us an Examination, the Reſult of which would be contrary thereto.

If what we know of Hiſtory from the Creation of the World to the Deluge, contains very few Things for our Information, and rather raiſes our Doubts than gives us any Certainty; we have as little Aſſiſtance to know what paſſed in the two firſt Centuries after the Flood. The three Sons of *Noah* are the only Source of all Mankind, at leaſt it is ſaid ſo; and yet thoſe vaſt Empires and Colonies, which we find ſoon after the Deluge, ſeem to contradict that Belief ‡. The implicit

* The Prieſts affirm that *Menes*, who was the firſt King of the *Egyptians*, made a Bridge over the River to *Memphis*, ---- the ſame Prieſts ſhewed me in their Hiſtories, the Names of 330 Kings, which reigned ſince *Menes*, among whom were 18 *Ethiopians*, and a foreign Woman; all the reſt were *Egyptians*. *Herod.* Lib. XII. p. 279. Vol. I.

† The Prieſts make the Reign of their Kings, to begin near 11000 Years before the hundred and fortieth Olimpiad; the Time in which I myſelf went into *Egypt*, in the Reign of *Ptolomy*, ſirnam'd the *Modern Bacchus*. The greateſt Part of theſe Kings, were Natives of *Egypt*; however, there were ſome from *Ethiopia*, *Perſia* and *Macedonia*. *Diod.* Lib. I. Sect. 2. Tom. I.

‡ From hence ariſes another Difficulty in the Holy Scriptures, *viz.* What Race of Giants that was; that ſubſiſted a long Time after the Deluge? and who were thoſe Daughters of Men, whoſe Marriage with his own Sons, God diſliked to that Degree

implicit Faith alone, which we owe to the Holy Scriptures, can authorize this Opinion, which seems

gree, that he repented he had made them? Would he have condemned this Alliance, if these Daughters and Sons had been descended from the same Ancestors? God, I say, who sometimes, under the Law, permitted Marriages with Strangers? The Scripture does not observe before the Flood, that there was a favorite Race or People among the Descendants of *Adam*. Such Marriages therefore could not then be regarded as improper; they were not forbidden, and consequently could not be so hateful to God, as they are said to be, if they had been contracted with the Daughters descended from the same Family.

Langlet's Cartons conservez par Beyer, p. 183.

The Difficulty which Abbé *Langlet* speaks of, hath embarassed several Fathers of the Church: Some of them have supposed, that this Race of Giants, was produced from the Carnal Affections which Angels had for Women; which was the Cause of their Fall. St. *Justin* says expressly, that the Angels were changed into Devils for having had Commerce with Women. Παρεδωκεν οιδ' ἄγγελοι ποξαβάντες τήνδε τὴν τάξιν γυναικῶν μίξεσιν πτ' ἰήθσαν, καὶ παῖδας ἐτεκνωσαν οἳ ἐισινοὶ λεγομένοι δαίμονες καὶ πρός ἔτι λοιπόν θ' ἀνθρώπειαν γέν ἐκωτοῖς ἐδούλωσαν. *Angeli autem, ordinationem, sive dispositionem eam transgressi, cum mulierem, concubitus causa, amoribus victi tum filius procreaverunt dæmones, sunt dicti, atque insuper reliquum genus humanum, in servitutem suam, redegerunt. Sanct. Just. Philosoph. & Martyr. Opera, Apolog. prim. p.* 44. *Edit. Colon.* 1636. *Athenagoras* is still more particular, concerning the Love which Angels had for Women. According to him the Giants were produced by this criminal Commerce. ὀγῖτ' δὲ ἀμελήσας καὶ πονηρος περὶ τὴν τῶν πεπιστυσμενων γηνόμενος διοικησας ἐκ μὲν ἓν τῶν περὶ τας παρθενου, ἐχόντων, οι καλούμενοι ἐγευνθησαν γίγαντες. *Itaque a statu suo defecerunt: (Angeli.) alii quidem amoribus capti virginum, & libidine carnis accensi; ipse vero princeps, tum negligentia, tum improbitate circa procurationem, sibi concreditam ex amatoribus, igitur virginum, gigantes, ut vocant, nati sunt, Athenagor. Legat. pro Christian.* p. 27. *Edit. Colon.* 1636. Here are two ancient Authors, who explain this difficult Passage of Holy Writ, in the same manner. But another Father treats all these Reasonings, as childish Fables. *Non est sine damno, audire, etiam, ipsos sanctos Angelos, corporum formositatibus affici, & liquefieri, hoc est oblectari tam prophanis, et absurdis voluptatibus. An non verisimile multos inde turbari, et contemnentes meliora, delitiarumque amorem deligere, dum considerant, quod difficile & arduum ipsis sit carnalibus voluptatibus, omnino obluctari, & crediderunt etiam ipsos angelos sanctos affectiones sequi? Igitur quod ignoraverit virtutem scriptorem absque laborè demonstrabimus. Divi Cyrilli, Lib.* IX. *cont. Julian. Tom.* II. *p.* 206. *Edit. Basil.*

ſeems ſo oppoſite to Reaſon, though it does not demonſtratively overthrow it.

The natural Poſſibility of an univerſal Deluge, in the Condition the Earth is now, forms another Difficulty, which is as conſiderable as the numerous Increaſe of People, which is ſaid to be made, immediately after the Flood *. Some Writers have maintained, that the Deluge was far from being univerſal †; and that the Intention of the Almighty

Baſil. 1546. Who ſhould we follow, St. *Juſtin*, or St. *Cyril*, the one affirms a thing, which the other condemns. One may in general apply to the antient Fathers, who attempt to explain the Holy Scriptures, the Pleaſantry of an Author, relating to Phyſicians, *Hippocrates, ſays yes, Galen ſays no, and I ſay both yes, and no.* What Man of common Senſe can tell what Side to take in the midſt of ſo many Difficulties, ſo vainly debated by the greateſt and moſt venerable Writers? How many things are there in the Scriptures as obſcure as the Race of the Giants, and explained in as contradictory a manner.

* The Connoiſſeurs obſerve, that in the preſent State of the Earth, it is impoſſible that a Deluge ſhould be univerſal, and riſe fifteen Cubits above the Tops of the higheſt Mountains. The Sea, at a Medium, is not above 300 Paces deep. The higheſt Mountains, as the *Gordian Hills* or *Ararat*, do not riſe more than 3000 Paces above the Surface of the Sea. Thus, without reckoning that the Capacity of the Globe is enlarged in proportion to its height, there muſt have been twelve or fifteen times as much Water to cover the Earth in the manner the Scripture mentions. And as it takes Notice only of natural Means, ſuch as the Opening of the great Deep, and the Fall of Rains, this prevents, ſay thoſe Gentlemen, the Anſwer that might be made, by alledging, that God created a new Quantity of Water to compleat this great Deſign, which he annihilated afterwards. For, according to the Scripture, he only make uſe of a Wind to dry them up; thus it is probable, that the Means he made uſe of to make them overflow the Earth were natural alſo. *Lenglet* ubi ſupra, p. 187.

† They maintain, that it was impoſſible for the Rain to fall in ſuch Abundance, as to cauſe ſuch an Effect. They ſupport this Aſſertion by the Arguments of a famous Philoſopher (Father *Merſenne*) who proves by clear Demonſtrations, that the moſt violent Showers produce but an Inch and half of Water in half an Hour, which makes ſix Feet in a Day. Now the Deluge laſting but forty times twenty four Hours, ſuppoſing the Height of the greateſt Mountains be two thouſand Paces (which is not one third of their real Height) to overflow them, there muſt

Almighty was only to puniſh a People, which had been ungrateful for the Bleſſings, which he had highly favoured them with. They alſo quote the Scripture itſelf to fortify this Opinion; they interpret in their favour a Paſſage in *Geneſis*, where it is expreſsly ſaid, that the Sons of *Noah* divided the Nations in the Earth after the Flood *. From whence it appears, that the Children of *Noah* had not then divided the Earth amongſt themſelves, but it was ſtill inhabited by the Nations which they had to conquer.

In ſhort, the Hiſtory of Nations contradicts this general Inundation of the whole Earth. We find in the Ages immediately ſucceeding the Deluge, vaſt Empires formed and very populous, as *Syria*, *China*, *Egypt* and *Ethiopia*. It is impoſſible that ſeven or eight Perſons in the Space of 300 Years (nay even of 150 Years, if we make a rigorous Enquiry) ſhould People thoſe vaſt Provinces which are ſurrounded by the *Tigris* and *Euphrates*, and which were inhabited by the Children of *Noah*.

Without having any regard to the fabulous Annals of the *Egyptians*, which lay the Foundation of their Empire 34201 Years before the Reign of their firſt King, and in following Hiſtorians, who have written more exactly, ſuch as *Manetho* and *Herodotus*, we find *Egypt* very populous 150 Years after the Flood, and Arts and Sciences in a flouriſhing State. *Amaſis*, who is alſo called *Ammoſis* or *Amos Pharaoh*, who is reckoned the firſt King of *Egypt*, reigned there from the Year of the World 2312 to the Year 2337; and

muſt have fallen one hundred and twenty five Feet of Water in twenty four Hours, inſtead of the ſix Feet which fall in the heavieſt Rains; which exceeds the Poſſibility of Nature.

Jewiſh Letters, Tom. II. Let. 35. p. 36.

* *Ab his diviſæ ſunt gentes in terra poſt diluvium.* And by theſe were the Nation divided in the Earth after the Flood. *Gen.* X. 32.

and that *Chebres Pharaoh* ſucceeded him, and reigned 23 Years, according to *Euſebius*'s Calculation. Other Hiſtorians, following *Manetho*, make out this Genealogy in a different manner; but in the End, they all agree, that the Beginning of the Reign of the Kings of *Egypt* was in the Year 2312. It ſeems then impoſſible, that the Earth could be repeopled in ſo ſhort a Space; and thoſe vaſt Empires, where we find Arts and Sciences * in Perfection, the Diſtinction of Ranks and Eſtates, a Government, a Religion, and Difference in Worſhip, almoſt evidently prove, that they were of a conſiderable ſtanding, and ſtrongly oppoſe the Univerſality of the Deluge †.

Theſe

* *Pere Du Halde* informs us of ſome Particularities relating to this Subject, which proves that Arts were not leſs ancient in *China* than in *Egypt*. That which is certain, ſays he, is that *China* was peopled above 2155 Years, before the Birth of Chriſt; which is demonſtrable from an Eclipſe of the Sun which happened that Year, as is evident from the Aſtronomical Obſervations, taken from the *Chineſe* Hiſtory and other Books, which were publiſhed in the Year 1729.

Du Halde's Hiſtory of *China*, Vol. II.

† A *Nazarene* Monk, who has entered into a Diſcuſſion of theſe Facts, to ſhew the Clearneſs and Evidence of them, thought it the beſt way to make Men with the Daſh of his Pen. He has made an exact Calculation of the Sons, Grandſons and Great-Grandſons, *&c.* that four Men might have in two hundred Years Time; and he has made them out to be this Number 268,719,000,000, which are a great many more than would have peopled five or ſix Globes like this Earth. His Arithmetical Calculation has not convinced his Antagoniſts; they ſay, that Men are not actually made, as he makes them, with a Daſh of his Pen; and that he does not ſeem to be expert in that Exerciſe. They alſo object, that according to the Scripture, Men had not Children till very late, and then not a great many; ſo that theſe Colonies, ſo eaſily made upon Paper, were impoſſible in Fact. They add, that the Increaſe of the *Iſraelites* in *Egypt* was looked upon as a Miracle, when in the Space of two hundred and fifty Years, 600,000 Men, that were fit for War, ſprung from the ſeventy Perſons, who ſettled there with the Patriarch *Jacob*; and yet this Miracle falls vaſtly ſhort of the pretended Increaſe, which is ſuppoſed to be made in two hundred and ſixty Years from four Perſons.

Jewiſh Letters, Tom. II. Lett. 35. p. 35.

Theſe firſt Difficulties, which are found in Hiſtory, ought ſo much the leſs to be wondered at, ſince there appear in Ages nearer hand as conſiderable, and as hard to be accounted for. *Moſes*, *Joſephus*, and all the *Jewiſh* Hiſtorians ſpeak, in a high Strain, of the famous Departure of their Nation out of the Land of *Egypt*; and they have inſerted in their Writings the Miracles that were wrought in Favour of that Enterprize. But we find that the *Egyptian* Authors, and thoſe of other Nations, Men of as good Credit as *Joſephus*, have ſpoken of it with the utmoſt Contempt. Several Hiſtorians, as well as *Manetho* the *Egyptian* Prieſt, call the *Jews* a Company of naſty, leprous People. They ſay, that they were baniſhed the Country by *Amenophis*, who was then King, and that they retired into *Syria*, under the Conduct of *Moſes* an *Egyptian* Prieſt *. If this Account did not contradict the Scripture, it would be ſo much the more probable, as that it appears that *Moſes* has retained many of the *Egyptian* Ceremonies in the *Jewiſh* Religion; this is at leaſt the Opinion of Sir *John Marſham* †, who does not doubt that the *Jews* took moſt of their Ceremonies from the *Egyptians* ‡. It is certain, the Prophet *Jeremiah* reckons

* *Cheremon*, a celebrated *Greek* Author ſays, that under the Reign of *Amenophis*, two hundred and fifty thouſand leprous Perſons were baniſhed from *Egypt*, and they departed from thence nnder the Conduct of *Tiſithen* and *Peteſeth*, i. e. *Moſes* and *Aaron*. *Marana*, a Spy in the Courts of Chriſtian Princes, Tom. IV. Lett. 83.

† Sir *John Marſham*, an *Engliſhman*, the Author of an excellent Book, intitled *Chronicus Canon Ægyptiacus*; it was printed at *London*, in Folio, 1672.

‡ Several ancient Authors have pretended, that the *Jews* received the Rite of Circumciſion from the *Pagans*. *Herodotus* ſays, (*a*) that the *Colcheans*, the *Egyptians*, and the *Æthiopians*, "*pudenda circumcidebant, a principio*, and that the *Phenicians*, "and ſuch of the *Syrians* as lived in *Paleſtine*, acknowledge "that

(*a* *Herod. Euterp.* p. 127.

reckons the *Egyptians* the firſt of the circumciſed Nations *. *Tacitus*, whoſe Authority is of great weight, gives us an Account of the *Jews* Departure out of *Egypt*, with ſeveral remarkable Circumſtances. He ſays, that *Moſes*, one of the leprous Exiles, being a Man of Parts, and of Repute among them, ſeeing them much diſheartened, exhorted them to be of good Courage, and getting himſelf made their General, he became their Legiſlator, and conducted them through the Deſarts of *Arabia* †.

If

" that they have borrowed this Ceremony from the *Egyptians*." *Diodorus Siculus* (*b*) ſays much the ſame thing as *Herodotus*. *Philo*, a *Jewiſh* Author, and conſequently of great Authority, with regard to the *Jewiſh* Cuſtoms, ſeems to authoriſe the Opinion of theſe *Pagan* Authors. They ridicule, ſays he (*c*), Circumciſion as practiſed by our Anceſtors, though it has been eſteemed by other Nations, and particularly by the *Egyptians*, who excel all the Nations in the Univerſe, for their Multitude and Wiſdom. Theſe Proofs are ſufficiently ſtrong, as to the uſe of Circumciſion, among the *Egyptians*, before it was practiſed by the *Jews*; and yet the latter pretend that they received it from *Abraham*, who was immediately enjoined it by God. This Opinion is received by almoſt all the modern Divines. Mr. *Saurin*, who has endeavoured to ſupport it, with the utmoſt of his Skill, frankly owns, *that if the profound Diſquiſitions of the learned, who have ſought after the Origin and Cauſe of this Rite, have ſometimes afforded us great Light, their Speculations have likewiſe often convinced us, of the Want of Utility in their Labours, in as much as they have furniſhed us with Motives to ſuſpend our Judgment concerning this Matter.* Diſcours Hiſtoriq; Critiq; Theolog. & Moraux ſur les Evenement les plus memorab. du V. & du N. Teſtament, *Tom.* I. *Diſcours* 15. *p.* 250.

* *I will puniſh all them which are circumciſed with the uncircumciſed,* Egypt, *and* Judah, *and* Edom, *and the Children of* Ammon *and* Moab. Jerem. *ch.* ix. *v.* 25.

† *Plurimi Auctores conſentiunt, orta per* Ægyptum *Tabe, quæ Corpora fœdaret, Regem* Occhorim, *adito* Hammonis *Oraculo, remedium petentem, purgare regnum, & id Genus Hominum, ut inviſum Deis alias in terras avehere juſſum. Sic conquiſitum collectumq; vulgus, poſtquam vaſtis locis relictum ſit, cæteris per lachrymas torpentibus,* Moſen *unum exſulum monuiſſe, ne quam Deorum Hominumvè opem expectarent, ab utriſq; deſerti, ſed ſibimet*

(*b*) *Diodor. Sicul.* Lib. IV. p. 24.
(*c*) *Phil.* de Circumciſ. p. 10.

If the Scripture did not determine our Belief, you ſee, Madam, how difficult it would be to arrive at any Certainty among ſo many different Opinions. The *Jewiſh* Authors aſſert Facts, which are contradicted by the *Egyptians*; the Appearance of Truth ſeems to be on the ſide of the latter, but Religion ſpeaks in Favour of the former.

SECT. V. *Of the Partiality of Hiſtorians prejudiced in Favour of their own Nation and Religion.*

THE Partiality of Hiſtorians, and the good Opinion that moſt of them have for their own Country, or Sect, is one of the principal Obſtacles, which hinders us from finding in their Writings the exact Truth of Facts which they relate. The ſame things are repreſented ſometimes by two Authors of diſtinguiſhed Merit, in a manner ſo different, that we are aſtoniſhed to ſee the wide Difference of their Sentiments. If we were not obliged to ſubmit to the Deciſions of the Scripture, pray, Madam, judge what we ſhould

met ut Duci cæleſti crederent, primo cujus auxilio credentes, præſentes miſerias pepuliſſent.

That is to ſay, That almoſt all Authors, agree in this ‘ point. That *Egypt* being infected with the Leproſy, King ‘ *Occhoris*, by the advice of the Oracle at *Ammon*, drove them ‘ out of his Country, as a uſeleſs Rabble, and hated by the ‘ Gods. They add, that when they were diſperſed in the ‘ Wilderneis and had loſt all their Courage, *Moſes*, one of their ‘ Leaders (*a*), adviſed them, not to expect any Succour from ‘ the Gods of the People, who had forſaken them, but to ‘ follow him as a cæleſtial Guide, who would conduct them out ‘ of Danger.’’ *Tacit.* Hiſt. Lib. V. This Tranſlation is done from that of *Ablancourt*.

(*a*) This is not according to the Original; for it is there, Moſes *one of the Exiles*. *Manetho* ſays, *one of the Lepers*.

ſhould think of that Paſſage in the Bible, where it is ſaid, that the *Iſraelites* being ready to die for Thirſt in the Wilderneſs, *Moſes* cauſes Water to guſh out of a Rock that he ſmote with a Rod. See here how *Tacitus* relates that Fact. Nothing afflicted them ſo much as want of Water; they were ready to die for Thirſt, and laid themſelves along the open Plain, when a Herd of wild Aſſes, returning from Paſture, went directly to a Rock covered with ſhady Trees; *Moſes* followed them, conjecturing there might be ſome graſſy Soil, and found great Plenty of Spring-Waters *.

As the Mind is always touched with the Appearance of Truth, and ſpontaneouſly falls in with that which is natural, if *Moſes* were only a meer Hiſtorian, the moſt Votes would be in favour of *Tacitus*. But none of the *Jews would* alter their Opinions; they are inflexible with regard to their Hiſtorians; and their Vanity is more flattered, by ſuppoſing that their Fathers were ſuccoured in the Wilderneſs by the immediate Hand of Heaven, than by a means that happened in the common Courſe of Things.

All other Nations have this ſame Foible with the *Jews*; and they willingly adopt all Events, that tend to make them famous. An Hiſtorian, who would pleaſe, and get Readers, is obliged to accommodate himſelf to this pernicious Uſage. *Quintus Curtius* is not afraid to ſay, that he writes many Things, that he cannot believe. *Equidem plura tranſcribo quam credo, nam nec adfirmare ſuſtineo*

* *Sed nihil æque quam inopia aquæ fatigabat; jamq; haud procul exitio totis campis procubuerant, cum Grex Aſinorum agreſtium è paſtu in Rupem nemore opacam conceſſit; ſecutus* Moſes, *conjecturâ herbidi ſoli, largas aquarum venas appulit.* Hiſt. Lib. V. I cannot but wonder, that this Fragment ſhould be preſerved to our Time, and that the Monks have not diſpatched it, in the Reign of Ignorance, as they have done by many Manuſcripts, either ſuppreſſing or caſtrating them.

neo de quibus dubito, nec ſubducere quæ accepi. The Precaution that *Quintus Curtius* takes to ſay, that in relating Things he does not believe, he will not give Reaſons to prove them, does guard him from the Blame that has been caſt upon him, that he has given into extravagant Opinions, and recited Facts rather like a Poet, and Declaimer, than an Hiſtorian *.

The *Greek* Hiſtorians, and particularly *Herodotus* have been often taxed with ſpeaking too favourably upon all Occaſions of their own Country. The *Latins* have been reproached with the ſame. And we ſee in our Days what Extravagance many Writers fall into, when they ſpeak of their own Nation. An Hiſtorian, who is reckoned neither very exact, nor very honeſt, could not forbear crying out againſt the Folly of thoſe Authors who writ the Panegyric rather than the Life of *Charles the Fifth* †. Not content with having related many Prodigies, they aſſure us, that the Sun ſtopped his Courſe, to give the *Imperialiſts* Time to defeat the Duke of *Saxony* and the *Proteſtant* Army intirely, in the Year 1547. And *Sandoval*, Biſhop of *Pampelione*, and Hiſtoriographer to *Philip* III. after having certified this Fact, ſays, that the Sun was ſeen that Day during the Battle of the Colour of Blood, in *Spain*, *France*, *Italy* and *Germany*. He ſpeaks of this Miracle as being an Eye-Witneſs; and the Common People, to this Day in *Spain*, are perſuaded of the Truth of the Fact.

You

* Q. Curtio ---- *non defuêre qui objicerent quæſiti interdum medicamenta candoris, et numerorum uſum paulò intemperantiorem.* Famian. Strad. Prol. III. Lib. II. p. 265.

† Father *Maimbourg* in his Hiſtory of *Lutheraniſm*. Tom. II. p. 164.

You ſee, Madam, what is done to authorize everlaſtingly the Opinion of the renewal of a Miracle that God formerly wrought for his peculiar People! Such Stories are contrary to Religion; and weak Minds may fancy, that ſeeing it was believed, and is ſtill believed, in ſome Parts of *Europe*, that the Sun ſtopped his Courſe for *Charles* V. it might be believed heretofore in *Aſia*, that the Sun ſtood ſtill at the Command of *Joſhua*. The Authority of the Hiſtorian, who certifies this Miracle, that happened in the ſixteenth Century, heightens the Parallel; he was a Biſhop, a Perſon of Diſtinction, and a Judge of the Religion eſtabliſhed by God himſelf.

SECT. VI. *Hiſtorians ſtuff their Books with Prodigies.*

THE great Number of Miracles, which Hiſtorians inſert in their Writings, lead us alſo from the Knowledge of the Truth. Extraordinary Events are ſo many dark Curtains which conceal the true Cauſe of a Multitude of Facts. In the antient *Latin* and *Greek* Hiſtorians, we find that Sacrifices, the Entrails of Victims, or conſecrated Pullets occaſion and decide the Gain or Loſs of an Empire, and the Continuance of a Kingdom. There are in the firſt Book of *Herodotus* almoſt as many Oracles as Pages. I do not queſtion but that they were delivered; but I would gladly know whether or no any great Credit was given to them; whether or no their Anſwers were not according to the Preſents that were made to them? or whether their ambiguous Senſe was not made uſe of to lead or inveigle the giddy Multitude? There is no doubt to be made, but that they

they who conſulted them put no Confidence in them; and if it had been in their Power, perhaps they would have treated the Authors of them, as a *Roman* General once treated the conſecrated Chickens.

When the Ancients ſpeak of a Miracle, and attribute ſome remarkable Event thereto, I wiſh they had explained to us how it produced it, and reſolved us particularly, whether or no ſuch an Event was brought about by a ſupernatural Cauſe, or a common one, occaſioned by the Idea and Impreſſion of a Miracle upon the Minds of the People or Army. It ſeems as if they were ſolicitous to inſert theſe Prodigies, only to make their Hiſtories the more venerable. Even *Livy*, a Writer of ſuch great Reputation, a Genius of ſuch Judgment and Underſtanding, has given us an inſupportable Compilation of all the pretended Miracles *, that were believed by the ſuperſtitious Pagans. For this Cauſe it was, that St. *Gregory* condemned his Works to be burned, as containing a vaſt Number of Prodigies and ſurprizing Events, the Belief whereof was contrary to the Catholick Faith. *Livy* was under a Neceſſity of writing after this manner; the public Regiſters, and the Works of the Hiſtorians, who preceded him, were full of theſe chimerical Viſions. He could not leave them out without giving great Offence to the People,

* Sometimes he puts the Elements into the greateſt Confuſion, and afterwards, makes a Cow bring forth a Horſe; ſometimes Statues ſweat Blood; at others there is a Shower of Stones, if we will credit him, or rather the Hiſtorians, from whom he borrows theſe idle Tales. *In locum Marcelli, ubi is ſe magiſtratu abdicavit, ſuffectus Fabius, Maximus tertium. Mare arſit eo anno; ad ſinueſſam bos equuleum peperit, ſigna lanuvii ad Junonis ſoſpitæ cruore manavere: Lapidibus que circa id Templum pluit: Ob quem imbrem, novendi alii, ut aſſolit, ſacrum fuit: Cæteraque prodigia cum cura expiata.* Tit. Liv. Decad. III. Lib. 3. p. 114. Edit. *Franck.* 1588.

People, who were as ſuperſtitious in his Time, as they had been in former Ages. We may ſay, that the Errors of our Fathers are the Source of ours, and that ours will augment thoſe of our Children. Almoſt all the *Roman* Catholic Hiſtorians abound with Puerilities and pious Chimeras †, which render their Works contemptible to Men of Senſe; and herein the *French* ſeem to vie with

† The Hiſtorians, who in theſe latter Times have had great Reputations, have not been more abſurd with relation to Prodigies and Miracles than *Livy*. Without ſpeaking of *Maimbourg*, and many other Writers acknowledged to be Authors of no Credit, I ſhall content myſelf with quoting *Pere D'Orleans*, who in one Action which happened between the *Spaniards* and *Mahometans*, has made as many Miracles as the *Roman* Hiſtorians. I ſhould be glad to know why we have ſeen ſo few of theſe Prodigies in the four laſt Centuries: Men may kill one another as much as they pleaſe without the peculiar Interpoſition of Heaven; the Angels are not ſent now to exterminate the *Mahometans*, the Elements are not thrown into Confuſion to deſtroy the *Saracens*. Is it becauſe the Perſons, in favour of whom Miracles were wrought, were more honeſt than we are at preſent? Thoſe who are acquainted with Hiſtory certainly will not maintain any ſuch Opinion. Let's hear then what *Pere d'Orleans* ſays, and we ſhall ſee whether modern Hiſtorians have been more reſerved than the antient, with regard to Miracles. Alcamen *loſt no time, he cauſed the firſt Battalions to advance towards the Cavern, and when he was near enough, he ordered thoſe* Goths *to be attacked that firſt preſented themſelves. They ſent a Shower of Stones and Arrows which would have over-whelmed them, if, by a Miracle, which all Hiſtorians aſſert, their Arrows had not returned back againſt thoſe who let them fly; and this by an inviſible Hand, ſo that the* Moors *only felt the Strokes. Many were killed and others wounded. A pannick Fear ſpread through the Army, and in proportion as they were affrighted,* Pelagus *and his Men perceived themſelves animated with freſh Courage. They ſallied out of their Caverns like raging Lions, and charged the Infidels with ſo much Valour and Succeſs, that they left about twenty thouſand dead upon the Field of Battle. The General continued there, the reſt ſought for Refuge on the Top of the Mountain* Auſena, *under which the Cave had been dug that* Pelagus *had occupied; but the Fugitives could not eſcape thoſe whom the* Gothic *Prince had ſent after them. Some were killed by the Edge of the Sword, and others were drove to the Banks of the River* Deva: *where, being*

with the *Spaniards*; for it is as ridiculous to ſay, that the Walls of *Angoulême*, in the Reign of *Clovis* I. were built, in an inſtant, through the miraculous Efficacy of a little Vial *, as to make the Sun ſtand ſtill, during the Engagement of the Imperialiſts with the Proteſtants.

The Writers, who have tranſmitted to us the Hiſtory of the *Croiſado's*, have filled it with ſo many Miracles, and ſo contrary to Reaſon, that it is ſuperfluous to ſhew how falſe and ridiculous they were. Who can believe, that Celeſtial Battallions, clothed in white, came down from Heaven to aſſiſt People, whoſe firſt Intention was indeed good, but whoſe Actions to obtain it were ſo wicked, that moſt of them, without Fear or Remorſe, perpetrated the worſt of Crimes. The People, who lived at that time, had their Minds filled with Notions of Enchantments, Prodigies, Witchcrafts and Miracles; that was the Taſte of the Age; and Authors, who writ the Actions of illuſtrious Perſonages made uſe of the *Romantic* Stile. From hence we have the incredible Hiſtories of *Renaud*, *Armidas*, *&c.* which have been renewed of late by the *Italian* Poets.

See here how a celebrated *Theologian* ſpeaks of the Taſte, that reigned in thoſe Times; † *this was the Fault, or rather the injudicious Simplicity of many of the Ancients; that they imagined they wanted Elegance in writing the Actions of illuſtrious Perſons, if, for the Ornament of their Stile, as they*

D *thought,*

being engaged in a Defile between a craggy Rock and the Bank of the River, the Earth ſuddenly fell down and buried them in the Water. Revolutions d'Eſpagne, &c. Tom. I. p. 46.

* *Voſſius* de Hiſtoricis Latinis, p. 98.

† Hoc erat antiquorum plurimorum vitium, vel potiùs quædam ſine judicio ſimplicitas, ut in clarorum virorum geſtis ſcribendis ſe minùs exiſtimarent elegantes, niſi ad ornatum, ut putabant, ſermonis poeticas fictiones, vel aliquid earum ſimile, admiſcerent, & conſequentèr vera falſis committerent.

thought, they did not bring in poetic Fictions, or ſomething like them, into their Narrations, and thus made a Mixture of Truth and Lyes. The Belief of Prodigies and miraculous Events had ſeized the Imagination of the People ſo ſtrongly, and carried them to ſuch Extravagancies, that in the ninth Century, *Agobard*, Biſhop of *Lions*, writ a Book to put a ſtop to the Courſe of ſuch ridiculous Superſtitions. *So great a Folly*, (ſays that Prelate) *has ſeized the beſotted World, that Chriſtians now believe thoſe Abſurdities, that heretofore no ſuperſtitious Pagans would have given any Credit to* *.

SECT. VII. *Of the oppoſite Opinions of Hiſtorians of a contrary Party and different Religion.*

IT is true, that for theſe two or three Centuries paſt, Hiſtorians are much more moderate in the Article of Miracles. Some have even rejected thoſe that are recorded by the Ancients; but they have fallen into another Fault as dangerous to the Verity of Hiſtory. They ſeem rather to be Advocates and Defenders of certain Parties, than faithful Recorders of what has paſſed. The Differences in Religion, and the various Sentiments thereupon, which for ſome Centuries have divided *Europe*, have cauſed as much Confuſion in modern Hiſtory, as the Ancients have left in theirs †. Whenever a Catholick Author writes a Hiſtory, it is immediately contradicted by the different Sects of Proteſtants ‡. The ſame Facts, the ſame Events are ſet in a different Light; the Cha-

* Tanta jam ſtultitia oppreſſit miſerum mundum, ut nunc ſic abſurde res credantur a Chriſtianis, quales antea ad credendum non poterat quiſquam ſuadere Paganis. *Abegardus.*

† The Hiſtories of *Lutheraniſm* and *Calviniſm* by *Maimbourg*.

‡ *Seckendorf*, *Bayle*, and *Jurieu*.

Characters of Perſons are entirely unlike. Each thinks he has Right, Truth and Reaſon on his Side, and quotes Authors to ſupport his Opinions. The Author, who is contradicted, Appeals to the Judgment of his Reader; he cries out againſt the Diſingenuity of his Antagoniſt, and makes uſe of opprobrious Language, which ſerves only to darken the Diſpute; and we know as little of the Matter in Queſtion, when we have read his Book through, as when we began it. There are ſome *few Authors* *, which ſeem exempt from Partiality; but they are taken roundly to Taſk for it by the zealous Writers of their Party. They manage at leaſt their part ſo well, that if they do not prove them guilty of Errors, they embroil the Truth, and darken the Evidence of Facts. † If we may believe *Sleidan*, *Luther* lived and died as one of God's Elect; but moſt of the *Roman* Catholid Writers make him a Debauchée, and a poor miſerable Creature. There is no Medium between theſe oppoſite Extremes. What is to be believed in this Variety of Opinions? Every one follows the Writers of his own Sect. But this does not clear up the Truth; it rather opens a way to further Doubts and Uncertainty ‡.

I defy the moſt judicious Man, who ſhall read without Prejudice the different Hiſtorians of the Reformation in *France*, to be able to paſs an

* Monſ. *de Thou.*

† Hiſtory of *Charles* V.

‡ There is this Inconvenience to be borne with, when we read Books, that are written by Perſons attached to a Party, that we cannot diſcover the Truth therein. Facts are diſguiſed. The Reaſons for both Sides are not related with all their Force, nor Exactneſs. And that which would tire out the greateſt Patience is, that we muſt read a great number of hard and opprobrious Terms, which grave Men uſe, who from a Point of Doctrine, or a conteſted Fact, engage in a downright perſonal Quarrel. *La Bruyere*'s Characters, or Manners of the preſent Age, p. 171.

exact Judgment upon the principal Facts. Even St. *Bartholomew*'s Day loſes ſomething of its Horror and tragic Appearance, in many *Roman* Catholic Writers. As to the Characters of the leading Men of the different Parties, ſuch as the *Guiſes*, the *Montmorancies*, the *Condes*, and the *Chatillons*, it is impoſſible to make a Judgment of them from the Authors, who writ in their times *; thoſe have writ their Characters ſince ſeem to come pretty near the Truth, and take a juſter Medium. But they always expreſs ſomewhat of the Genius of their Party; and in ſpite of

* In writing Hiſtory, its difficult to avoid having the ſame Averſion for our Enemies, as if we were at open War with them; even the ancient Hiſtorians are blameable, for having given too great a vent to their Paſſions. In reality, it is my Opinion, that if the *Punic* Wars had been deſcribed by ſome *African* Authors, in ſuch a manner as it probably was done before the Deſtruction of *Carthage*, we ſhould ſee therein Deſcriptions of Battles very different from thoſe in *Livy* and other *Roman* Hiſtorians. Theſe always cauſe a Victory to be gained on their own ſide, by a leſs number of Soldiers, by the Courage and Conduct of their Commanders, and the good Diſcipline of their Armies; who can doubt but the oppoſite ſide aſſerts directly the contrary? The ſame Contrariety might have probably been obſerved, in the Reſolutions taken by the Senate of *Carthage*, which might have been accompanied, with as much Reaſon and Equity, as there was Injuſtice in that of *Rome*. And if there had remained to our Times what might have been written in Favour of each Side of the two contending Parties, it may be ſuppoſed that the Juſtice of the Cauſe would not have been found always on the ſide of Succeſs; as it now appears through the Misfortunes of the Vanquiſhed, whoſe Writings have been ſuppreſſed with their Liberty and Empire. For though the Hiſtorians of both Republics, might agree in the principal Events, ſuch as the taking of Towns, gaining of Battles, and others Facts of the like kind, yet it is out of Queſtion, that the Reaſons of their Determinations, the Means of putting them in Execution, and the Circumſtances of all Events, would have been repreſented in a different manner, according to the particular Genius of each Writer, who would uſe his utmoſt Skill to throw the Blame on the Side of the Enemy. *La Mothe de Vayer*, Diſcours ſur l'Hiſtoire, &c. Tom. I. p. 341. Edit. in Folio.

of their Affectation for the Love of Truth, we ſee by what Spirit they are animated. There are few who applaud the Virtue of their Enemies, without adding thereto ſome malicious Corrective *; ſo that to come at the Truth of a Fact,

* The following Judgment that is made, by one of the moſt learned Hiſtorians of different Parties; one may perceive, what Precaution he uſed in reading their Works, which he looked upon rather as Romances than Hiſtories. However he excepted *Thuanus* and *Mezeray* out of that Number. I own I ſeldom read Hiſtorians with a View of being inſtructed in paſt Events: But only to learn what each Nation and each Party has ſaid relating to Affairs. When I read the Hiſtories of the Civil Wars of the laſt Age, compiled by our own Authors, I find the Proteſtants of *France* were never in the wrong. But when I read the ſame Wars in Hiſtorians of the oppoſite Party, eſpecially if they are Monks or Eccleſiaſticks, I find myſelf tranſported into another Country, wherein I am quite loſt. The former pretend that the Proteſtants never were the Aggreſſors, that they bore a thouſand Inſults, and a thouſand Injuries, before they repelled Force by Force; that they never had any other Deſign but to obtain the Liberty of ſerving God, according to the Light of their Conſcience; that Obedience to their lawful Prince was always among them ſacred and inviolable; and that they only endeavoured to prevent the Fury of their Enemies, who ſurrounded the King, or to prevent the Overthrow of the fundamental Laws of the Kingdom, as to the Succeſſion of the Crown, which the Papiſts were determined to deſtroy by the moſt infamous and deteſtable League that ever was heard of. But the Monks flatly deny theſe Aſſertions. The Hugonots (ſay they) took Arms firſt, and conſpired againſt the Perſon of their King; they burnt and pillaged the whole Kingdom, without the laſt Provocation; every Step they took was with Deſigns more horrible than can be conceived; the Papiſts had always the beſt Intentions in the World; as to Violences, they made uſe of very few in the Places where they were ſtrongeſt; ſometimes, indeed, the Inſolence and Impiety of the Hereticks, armed them with a juſt Indignation, but the Hiſtorian ſlides over that in two or three Words. The Maſſacre of St. *Bartholomew*, was a prudent, neceſſary and lawful Act, to be beforehand with the Admiral *de Chatillon*, who had reſolved to cut the Throats of all the Papiſts.

After this, is it not Labour loſt to read ſuch Hiſtories? For if on the one hand, good Senſe obliges me to diſtruſt a Hugonot Hiſtorian, and to ſuſpect either not to have fathomed the pernicious Deſigns of his Party, for want of Diſcernment, and

or the Juſtneſs and Certitude of a Character, if we ſhould make uſe of the Maxim of *Joſephus* with regard to our late Hiſtorians, we ſhould never be able to draw any Certainty from their Writings. That *Jewiſh* Author's Maxim is this. *The true Mark and Proof of the Certainty of any Fact, is the uniform Agreement of all thoſe that have writ thereupon* *. So long as there are Monks to write Hiſtory, I am afraid we ſhall never meet with this uniform Unanimity.

SECT. VIII. *The ridiculous Folly of the Hiſtory, or Annals, of all the different Orders of Monks.*

THE ridiculous Annals, and fabulous Hiſtories, which have been writ by a great many Monks, have thoroughly ſpoiled the true Taſte of good

and on account of Prejudices, which blinded them, or to have diſſembled them with Intent to have ſaved the Honour of of his Religion: On the other Hand, the ſame good Senſe requires, that I ſhould diſtruſt an Hiſtorian of the Church of *Rome*, and that I ſhould ſuſpect either that he had maliciouſly concealed certain Circumſtances, which would have juſtified the Hugonots, or that he had falſly imputed to them things to render them odious, or that he believed, through a prejudiced Judgment, that every thing done by his Party was lawful, and that on the contrary, thoſe whom he looked upon as Hereticks, were animated only with the Spirit of Rage, Fury and Impiety. If I was allowed, who am of that Religion, to doubt the Fidelity of a Miniſter who has wrote a Hiſtory, with much greater Reaſon I may be allowed to ſuſpect the Fidelity of an Eccleſiaſtick, whether Secular or Regular, well knowing that a Catholick allows himſelf the like Liberty to doubt leſs the Fidelity of an Eccleſiaſtick than that of a Miniſter. You may perceive, Sir, that I have too much Foundation not to expect any thing in a Hiſtory, but the Spirit, the Prejudices, the Intereſts, and the Taſtes of the Party on whoſe Side the Hiſtorian writes. Critique generale de l'Hiſtoire du Calviniſme, p. 15.

* Τῆς μὲν γὰρ ἀληθοῦς ἱστορίας τεκμήριον ἱστορίας εἰ περὶ τῶν αὐτῶν ἅπαντες ταῦτα καὶ λέγοιεν καὶ γράφοιεν. Veræ ſiquidem Hiſtoriæ Judicium eſt, ſi de eiſdem Rebus omnes eadem dicant & ſcribant. *Joſeph.* contra Appion. Lib. I. p. 1035.

good Writing, and vaſtly darkened the Truth. They have related ſo many different Stories, and ſtuffed their Books with ſo many down-right Lyes, that whoever unhappily reads them, with any degree of Belief, is for ever turned aſide from the plain Path of Truth. Even they who have writ with the moſt Exactneſs *, and have obſerved the greateſt Moderation, have been obliged to falſify Facts on many Occaſions. Their Condition, their religious Engagements, and their blind Obedience to their Superiors, have obliged them to diſguiſe, alter, and weaken a great Number of Incidents in Hiſtory. Some have even carried their Partiality ſo far, that the Praiſe and Honour, which they have attributed to ſome Events brought about by their Orders, has occaſioned them to leave the Kingdom, to eſcape the juſt Indignation of the Magiſtrates †. Yet theſe very Writers have diſcovered great Talents, in the midſt of their Want of Sincerity. In every Thing where their Order or Religion is not concerned, they diſplay a juſt Penetration and a noble Genius. But the Convents and Cloiſters have produced ſuch a Tribe of Scribblers, that one would think, that they had entered into a Combination againſt common Senſe. They have diſgraced Religion in their Writings by attempting to adorn it. The Hiſtories of certain Orders, the particular Lives of a great many Saints are writ, according to the Judgment of a worthy ‡ Prelate, with leſs Gravity, than thoſe of the Pagan Philoſophers by *Diogenes Laertius*. The Legends of many of the Saints appear as void of Senſe and Reaſon, as the moſt ridiculous Fairy Tales.

* The Fathers *Daniel* and *d'Orleans*.

† Father *Jouvenci* being obliged to retire to *Rome*, becauſe of his Hiſtory of the Jeſuits, written in very fine *Latin*.

‡ *Melchior Cano*, Biſhop of *Canaries*.

I do not think one can tranſmit to Poſterity more fooliſh Stuff than is contained in the Book intituled, *Les Conformitez de St.* François *avec* Jéſus Chriſt. This Saint had very remarkable Converſation with moſt ſorts of brute Creatures; he underſtood their Language, and they his. One Day as he was going to read Divine Service, being hindered by the chattering of ſome Swallows, he made them this genteel Complement. Siſter Swallows, ſaid he, it is now time for me to ſpeak, for you have ſaid enough; hold your Tongues, till the Word of God be finiſhed; and thereupon they became ſilent. Another time ſeeing a Graſs-hopper, he called to her, and ſaid, Siſter Graſs-hopper! and the little Creature jumping upon his Finger, he made her ſing the Praiſes of God. What can be more Nonſenſical than this? Can People's Minds be filled with more ridiculous Viſions? And yet as ridiculous as theſe lying Stories are, they have found Abettors, even amongſt People educated in our Academies, and brought up amongſt Perſons of Learning *. The Jeſuit *Gazée*, (after having certified, that the Child *Jeſus* came down ſometimes from an Altar, to divert himſelf with ſome little Boys at Play) aſſures us, in the moſt expreſs terms, that a Sheep of St. *Francis* uſed to go into the Quire, as ſoon as ſhe heard the Monks begin to ſing, fell down upon her Knees, and ſaluted the Virgin *Mary*; and

* This Jeſuit compoſed a Book in two Tomes, entituled, *Pia Hilaria*, where amongſt other nonſenſical Stuff, this Story has a diſtinguiſhing Place. *Ridebis, Huguenota, ſi fors hæc leges, naſumque ringens, inquies, belli Logi! Frendebis, Huguenota, ſi fors non voles, vivet vigebit veritas, error cadet. Germana Franciſci ſoror docilis Biders, frendente te, ringente te, laudabitur.* Is not this a fine Reaſon, to aſſume an Air of Superiority over the Proteſtants! In reality this is very ridiculous. Many People intending to defend our Religion, put Weapons into the Hands of our Adverſaries.

and when the Hoſt was elevated ſhe kiſſed the Ground out of Reſpect thereto. After this I do not wonder that a Beaſt ſhould have a reaſonable Soul, and be initiated into the moſt abſtruſe Myſteries of Religion. They that can perſuade me, that the Child *Jeſus* will condeſcend to play with Cherry-Cobs, at Blindman's-Buff, or Leap-Frog, may perſuade me to believe any thing.

You need not be told, Madam, that ſuch Miracles want no Arguments to prove that they are abſolutely falſe; they carry with them the Marks of Impoſture. Is there any thing ſo abſurd, ſo contrary to Religion, and the Spirituality of our Souls, as to give to Beaſts Reaſon, and the Knowledge of God, which are the only things that diſtinguiſh Men from Brutes? And yet theſe Whimſies are not ſo aſtoniſhing and ſcandalous, as the part that ſome Saints are made to act. I do not believe, that the Superſtition of Idolaters, or the Impiety of Paganiſm ever gave *Venus* the Employ, that a *German* Monk has given the Holy Virgin *. He tells us, that a Prieſt having carried off one *Beatrice*, who was Door-keeper to a Convent of Nuns, ſhe, before ſhe fled, went to the Foot of the Altar of the Holy Virgin, made a ſhort Speech, and left her the Keys of the Convent. This Nun was abſent fifteen Years, and that after ſhe grew weary of a debauched Life, ſhe had a mind to return to the Convent. That the time ſhe had been abſent making her Hope that they would not know her, ſhe went to inform herſelf what they ſaid of *Beatrice*; they anſwered her, that ſhe was a very prudent Nun, and performed all the Duties of her Place to Perfection. By this ſhe found to whom ſhe was obliged for the Preſervation of her Honour, and running up to the Altar, the Vir-

* *Ceſarius.*

gin ſpoke to her thus * : *For theſe fifteen Years I have filled thy Place, and done thy Duty; return now to thy Poſt, and do Penance, for no body knows any thing of thy Crime.* We may add to theſe impious Tales, thoſe of St. *Maclou*, who ſaid Maſs upon the Back of a Whale; and thoſe of St. *Macarius*, who did Penance for ſix Months for having killed a Flea, or a Gnat that had ſtung him; and we ſhall ſee, that Cardinal *Beſſarion* had juſt Reaſon to ſay, that the Stories of the new Saints made him very much doubt of the Truth of what had been written concerning the old ones.

For ſome Years paſt, care has been taken to purge new Books of theſe monſtrous Tales and Puerilities, that rather ſcandalize Men, than attract them to the Practice of Piety. But notwithſtanding this care that has been taken, there remains ſtill a great Number of Pieces, the reading of which cannot be too much decried. You have read, Madam, a Collection of Miracles of the bleſſed *Paris*. A vaſt number of Perſons are actually perſuaded of their Reality, and yet nothing is more evident than that they are falſe. If it ſhould happen, that *France* ſhould generally embrace *Janſeniſm*, all the ridiculous Compilers of the *Freaks* of the Convulſionaries would paſs for Authors of an inexpugnable Authority; and however they are deſpiſed now, our Children and Grand-Children would be ready to ſacrifice their Lives in Defence of them. I do not think the Ridiculouſneſs of the miraculous Operations of St. *Paris* can be better exploded than they are

* Ego per quindecim annos abſentiæ tuæ officium tuum ſupplevi: revertere nunc in locum tuum, & pœnitentiam age; quia nullus hominum novit exceſſum tuum.

are done by the Author of the *Jewiſh* Letters †. And really Banter and Contempt are the only Weapons that ought to be made uſe of in combatting ſuch Viſions. It would be an Affront to the human Mind, to think it capable of falling into ſuch Errors, if it were not driven into them, by a frenetic Fury, that deprives it of the uſe of Reaſon. The common People of *Paris* believe in St. *Paris*; but a great many of thoſe, that inſpire the People with this Veneration for the Janſeniſt-Deacon, do not believe in God. They hate the Jeſuits, and that is enough for them to canonize their Enemy. If the Jeſuits ſhould take a Fancy to make ſome Saint of their ſort, he would eaſily paſs amongſt the People of their own Party, but he would be thought by the Janſeniſts the Reverſe of St. *Paris*.

Do you think, Madam, that a Man, who ſhall read two hundred Years hence the Hiſtorians of theſe different Parties, will be able to judge what is true? Eſpecially if the Janſeniſts ſhould one Day get the upper hand. With what Vehemence, not to ſay with what Fury, have the Gentlemen of *Sens*, and *Montpellier*, wrote againſt each other? Both have Certificates, and credible Witneſſes to authorize their Opinions, both appeal to Heaven to judge of the Rectitude of their Sentiments, and

† They were reſolved therefore to give the new Saint a Power to heal thoſe who ſhould apply to him, by Dancing and Singing. (*a*) An *Abbot*, after having gone through a long Courſe of Study, was the firſt that began the Exerciſe. He danced upon the Saint's Tomb a Dance, in which there was a Step called, *le Saut de la Carpe, (Topſy-turvy)* which the Abbot performed in Perfection. He had one Leg ſhorter than the other by four Inches; and pretended that every three Months it was lengthened a Line. A Mathematician, who caſt up the time in which the Cure would be compleated, reckons that he muſt cut Capers for the Space of fifty-five Years.

Jewiſh Letters, Lett. VI. p. 51.

(*a*) *The Abbot* Becheran.

both inſpire their Partizans with a firm Belief. You ſee in the preſent Diſpute, a Sample of that of the Proteſtants. We are in the Condition now, that our Grand-children will be one Day be in. They will have as much Difficulty to find out the Truth of Facts, as we have to make a juſt Judgment of the Events, that happened in the Reign of *Francis* I. and his Succeſſors.

SECT. IX. *The true Cauſes of an Event are often unknown to Hiſtorians.*

TO all theſe Difficulties, which are found in Hiſtory, you may add, Madam, the little Knowledge that Writers very often have of the principal Cauſe, that occaſions a War, a Peace, or a Treaty, which they are ſpeaking of. The greateſt Enterprizes have ſometimes no other Motives, than the Jealouſy of a Coquette, the Ambition of a Favourite, or the particular Hatred of a Miniſter againſt his Prince. Politicians confound themſelves in their Reaſonings, to find out a Thing which cannot be diſcovered. They argue, and even make whole Books to explain the Cauſes of a War, which perhaps was undertaken and continued on the moſt common Motives; and if it ſhould at laſt appear, that the Jealouſy or Revenge of a Woman, or the treacherous Sanctity of a Confeſſor, had ſet them to work, they would be equally the Subject of Laughter, who were ſuch Fools to engage in the War, and they who had beat their Brains to ſo little Purpoſe to find out the Cauſes of it.

The Expedition of *Francis* I. into the *Milaneſe*, is one of the greateſt Enterprizes, that *France* ever engaged in, and coſt her the moſt. And if we may

may believe *Brantome*, it was occaſioned only by the Intemperance of *Francis* I. and the Debauchery of the Admiral *de Bonnivet*. See here what that Author ſays of it. *The Admiral* de Bonnivet *was the only Man that adviſed* Francis *I. to paſs the* Alps, *not ſo much for the Good and Service of his Maſter, as to go to ſee a very beautiful Lady at* Milan, *who had been his Miſtreſs ſome Years before, and had given him a Pleaſure, which he had a mind to taſte again. I had*, continues he, *this Story from a great Lady of that Time; and even that he had recommended the Lady to the King. Her Name was* Signora Clarice, *and was reckoned one of the moſt beautiful Ladies then in* Italy. *He raiſed the King's Inclinations not only to ſee her, but to lie with her; and that was the principal Cauſe, though it be ſo little known, of that celebrated Expedition. Thus one half of the World knows not how the other lives; for we often imagine things to be, what they are the reverſe of; and the Powers above, who know all Things, may well laugh at us.*

Do not you think this a fine Motive, Madam, for ſhedding the Blood of ſo many unhappy Soldiers, and ruining a brave People by exceſſive Taxes, and reducing a Kingdom within an Inch of Deſolation, to have a Night's Lodging with *Signora Clarice?* I own, Madam, that a fine Lady is a noble Prize; but it is carrying the Thing very far, to put all *Europe* into a Combuſtion for the ſake of her. It is renewing the War of *Troy*, and commencing a long Siege for a leſs Occaſion than *Menalaus* had; for he demanded his own Wife, but *Francis* I. went in queſt of another Man's. Wherein then conſiſted the Policy of this *French* Monarch, by which it appears, that the famous Battle of *Pavia* was only the Conſequence of an imaginary Intrigue with a Lady, occaſioned

occaſioned by the debauched Conduct of Admiral *Bonnivet* his Miniſter and Confident?

If we could unravel the true Cauſes of many of the Events that happened in our late Wars, what amorous Intrigues, horrid Jealouſies, and unbounded Ambition ſhould we not diſcover! We are aſſured from good hands, that Women were the only Cauſes of the Siege of *Liſle*, the raiſing of that of *Turin*, and the ſaving of *Toulon*. No Hiſtorian has hitherto ventured to ſpeak his Mind thereupon. Who knows whether or no thoſe, who ſhall come after us, will have any Notion of theſe ſecret Motives, or whether or no they will not believe what has been already written? Who can certainly know what paſſed between the Prince of *Condé*, Monſieur *Turenne*, and Monſieur *Louvois?* He that could penetrate into the Springs, which the Jealouſy of that Miniſter ſet on Work, one after another againſt the Generals, might diſcover Particulars which perhaps would be of more Service to ſet the Actions of thoſe great Men in a clearer Light, than all that has been ſaid concerning them. It would be pleaſant to ſee how they found out the Secret of beating the King's Enemies, and defending themſelves againſt thoſe he had about him, and who endeavoured to procure their Fall or Diſgrace. How many other Generals would have loſt their Glory, if it had been known to what Motives they owed their Riſe? How many Battles have been gained, by the Advice of a ſuborned Miniſter, and a Traytor to his Prince! How many Places yielded up, that might have been eaſily defended! But theſe Things are concealed behind an impenetrable Veil. We only ſee what they have a mind we ſhould believe, and as *Brantome* ſays, the Powers above, who know all Things, may well laugh at us.

SECT.

SECT. X. *A Recapitulation of the Reasons of Uncertainty of History.*

YOU see clearly, Madam, what Necessity there is to give Credit to History, no further than as the Facts it relates are conformable to our natural Light and Reason. I have endeavoured to show you the Uncertainty, that Antiquity has spread over the most ancient Writings, and the Causes of the different Opinions amongst the Writers of our Days. You may observe how Prejudices and Religion have influenced their Minds, and how they have been obliged to accommodate themselves to the Taste of the People *. Thus it is easy for you to conclude, that there is no supporting an Opinion taken from the Authority of History, only so far as it is absolutely conformable to Reason. Prodigies, Miracles, and Things surprizing and contrary to Nature, are Follies and Falshoods, which the Names of an Author, however great he may be, can never render probable.

Before I go any further, and enter upon a Discussion of how few Things we can demonstrate by our natural Light and reasonable Faculties, I will examine what Credit is to be given to Tradition, and the Authority of the Learned, to the end that being divested of all Prejudices, we may not be hindred in our Progress by vain Objections, which, when they appear contrary to Reason, are still less to be regarded than the Uncertainty of History.

SECT.

* Ut rectè dicit Synesius in Calvitii Encomio Τὸ δὲ ῥᾴστον καταγελάσεται δῆμος· δεῖται γὰρ σοφίας. Ridet & despicit Plebs quod facillimum intellectu: opus verò ei Narratione fabulosâ. *Schoockius* de Fabula Hamelensi, P. II. Cap. II.

SECT. XI. *Of the Uncertainty of Tradition; and how much the Authority of the People is to be deſpiſed.*

THE greateſt part of the Facts and former Events, which are handed down to us only by Tradition, are ſo contrary to Reaſon, that they ſeem to have an Influence over the reſt; and to require that ſhe ſhould give them no Credit, till we have deliberately examined them. They who throw themſelves upon general Opinions tranſmitted to us, by the Succeſſion of Time, are like the conquered *Gladiators*, who, to ſave their Lives, threw themſelves upon the Mercy of the People of *Rome*, not being able to defend themſelves any longer by their Arms. This is a Thought of *Seneca*'s *: And indeed there is nothing more deceitful and falſe, than the Notions that moſt People have of the Foundation of their State, and the firſt Events of their Nation. The *Egyptians*, the *Greeks*, the *Romans*, and after them the *French*, with all our neighbouring Nations, have induſtriouſly applied themſelves to tranſmit to their Poſterity a thouſand Chimeras which they thought would contribute towards making their Country and Religion illuſtrious. From hence come the Stories in the fabulous Dynaſties of the *Egyptians*, the Hiſtories of the Gods and Demi-Gods of the *Greeks*; the Tale of the She-Wolf that ſuckled *Remus* † and *Romulus*; that of the Eſtabliſhment

* Non faciam quod victi ſolent, ut provocent ad populum: noſtris incipiemus armis confligere. *Senec.* Epiſt. 117.

† The moſt illuſtrious Hiſtorians, who have ſpoke of the Foundation of *Rome*, have perceived how unlikely what has been ſaid of it ſhould be true; but they have been carried down by the Stream, and forced to adopt Chimeras, which flattered the *Romans*, and made them conform to the Genius of

lishment of the Kingdom of the *Gauls* by the Son of *Hector*; the Descent of the sacred Vial from Heaven,

of the People, for whom they wrote, the number of prudent and philosophical Readers, having been very small in every Age. *Livy* well knew, how liable he was to be reproached by sensible Readers, and so he excuses himself as well as he can, and attributes to the Power of Destiny and Fate of the *Romans*, that which ought to be rejected as fabulous. *Sed debebatur [ut opinor] fatis tantæ origo urbis, maximique secundum Deorum opes imperii principium. Tit. Liv. Dec.* I. *Lib.* I. *p.* 11. *edit. Francfort.* 1588. *Plutarch* makes use of the same Excuse, to take off the Blame from himself, in relating so many Tales, which are met with, relating to this Subject in ancient Historians. There are Persons, says he, who will look upon this as a Fable, and a Tale invented at pleasure; but if we attend to the Power of Fortune, we shall not refuse to give Credit thereto, especially if we consider, that the *Romans* could not have attained to so high a Degree of Glory and Power, if there had not been something divine and extraordinary in their Origin. ὕποπτον μὲν ει τοῖς ἐστί τὸ δραματικὸν καὶ πλασμα τωδε, οὐ δεῖ δε ἀκιστειν, την τυχην ὁρῶντας οιὼν πο ημάτων δημιουργὸν ἐστι καὶ τὰ Ρωμαίων πραλματα λογιζομένους, ὡς οὐκ ενταυθα προυβη δυναμέως μὴ θειαν τινὰ ἀρχὴν λαβόντα καί μηδὲ μεδ μηδὲ παράδοξον ἔχανσαν. *Plutar.* in Vit. *Romul.* p. 22. This Reasoning is not unlike that of the *Mahometans*, to prove that God approves, by the Conquests he has enabled them to make, all the Follies of their Religion. In reality, *Plutarch* and *Livy* must depend greatly on the Complaisance of their Readers, when they entertain them under so frivolous a Pretence, with a thousand incredible Fables; thus Persons of Judgment and Learning, looked upon these Histories as mere Tales. And how could they give any Credit thereto, since there are famous Historians, among whom *Sallust* is in the highest Rank, who attribute the Foundation of *Rome* to the *Trojans*, who, under the Conduct of *Æneas*, went into *Italy* after the Destruction of *Troy*, and who united themselves to the *Aborigenes* for this purpose? *Urbem* (*a*) Romanam, *sicut ego accepi, condidere atque habuere initio* Trojani, *qui* Ænea *duce profugi, sedibus incertis vagabantur, cum his* Aborigenes, *genus hominum agreste, sinè legibus, sinè imperiis, liberum atque solutum. His postquam in una mœnia convenere, dispari genere, dissimili Lingua, alii alio more viventes, incredibile memoratu quam facile coaluerint. Sed postquam res eorum civibus, moribus, agris aucta, satis prospera, satisque pollens videbatur, sicuti pleraque mortalium habentur, invidia ex opulentia orta est. Igitur Reges populique finitimi bello tentare,* &c. You may see in this single Passage of *Sallust*, a Condemnation of all that so many Historians have related; why then should not we give him the Preference in

(*a*) Crisp. Sallust. Bell. Catil. *Cap.* VI.

this

ven, and a thouſand other pious and profane Abſurdities, that our Anceſtors took great Care to inculcate in their Families, and which from Generation to Generation are handed down to us. It was thus, that about the Year 476, the famous *Babylonian* Talmud was compoſed; an indigeſted Heap of all the *Jewiſh* Viſions, compiled and ſet forth by the Rabbins *Aſé* and *Hammai* *. You may be well aſſured, Madam, that if the Piece intituled *Les Conformitez de St.* François *avec* Jeſus Chriſt, and ſome other Works of his Followers, with the Life of *Mary Alacoque* were bound together in one Book, it would far ſurpaſs

this Matter, who is eſteemed the moſt correct amongſt the *Romans?* Many other Facts in the *Roman* Hiſtory are as uncertain, as that of the Foundation of *Rome.* Almoſt all Authors are contradictory with regard to *Romulus:* Nor do they agree better concerning the Reign of *Servius Tullus.* Under the firſt Conſuls, Hiſtorical Truth is altogether as uncertain; and we may readily perceive by reading *Livy*, *Plutarch* and *Dionyſius Halicarnaſſus*, the Uncertainty which abounds in the Hiſtory of three or four of the firſt Ages of the *Roman* Republick. Authors very often contradict each other; ſometimes they acknowledge, that they have made Choice among the oppoſite Opinions of preceding Authors, of thoſe which appeared moſt likely to be true. Here is, if I am not deceived, ſufficient Proof of the Uncertainty of Hiſtory, and Reaſons enough, not to admit of any Hiſtorical Fact, which is directly oppoſite to evident Notions, which will not bear the Teſt of Reaſon.

* The firſt Collection of the Talmud was made in the Year 188 by Rabbi *Juda Hakkadoſh.* It was called *Miſna*, i. e. *Repetition.* Afterwards in the Year 469 Rabbi *Jochanan*, being aſſiſted by ſome other *Jews*, made a new Collection of *Judaic* Precepts, which was added to the firſt; and this is what is called the Talmud of *Jeruſalem*, becauſe it was compoſed in that City. In 476 *Aſé* and *Hammai* enlarged this new Collection with many other fabulous Stories, and put it into the Form, in which we now have it. This laſt Work is called the *Babylonian* Talmud, and is that which the *Jews* commonly make uſe of. The Talmud is only a Collection of unpoliſhed Fables, and a Heap of Rabbinical Viſions, which have no other Foundation than the Authority of the Tradition of thoſe Times, when that Book was compiled. For further Inſtruction in this Matter, ſee *Buxtorf*'s Bibl. Rabbinica.

paſs the Alcoran for Folly and Nonſenſe, and even equal the Talmud.

It is not in Things that relate to Religion only that Tradition deceives us. There is little regard to be given to it alſo in hiſtorical Relations. Such is the Tradition that was believed in *France* in the Time of *Ronſard*, that *Aſtyanax* the Son of *Hector* was the Founder of the *French* Empire; and ſuch alſo is the Tradition that is ſtill believed in many Countries, that there was a Pope *Joan*; ſuch alſo is the Notion of the common People of *Venice*, who firmly believe that they are the immediate Deſcendants of the ancient *Trojans*. Every Nation, every Province, every City has its own fabulous Hiſtory, founded upon the Authority of Tradition. Nay, this may be even extended to every Family of Note and Diſtinction. They take their Riſe from ſome imaginary Hero *, or

* From the earlieſt Times, the Vanity of particular Perſons has ſtuffed Hiſtory with Falſhoods. It is not only among the *French* that the *Oſiers*, the *Moreris*, &c. and all the Inventors of fictitious Genealogies, have for the Sake of Intereſt confounded true Nobility with the falſe, and corrupted the Truth of Hiſtory; for the ſame thing has happened among the *Romans*. That which has contributed moſt, ſays *Livy*, to darken Hiſtory, are Funeral Orations, and the falſe Titles added to Images; every Family being deſirous of attributing all the Glory of great Actions to themſelves, as well as to have been employed in the higheſt Offices; this Practice has contributed greatly to confound the Actions of particular Perſons, and the publick Monuments. But that which is worſt of all, we have no Writer of thoſe Times, which we can confide in: *Vitiatam memoriam funebribus laudibus reor, falſiſque imaginum* Titulis *dum familiam ad ſe quæque famam rerum geſtarum honorumque fallente mendacio trahunt. Inde certe & ſingulorum geſta & publica monumenta rerum confuſa, nec quiſquam æqualis temporibus illis ſcriptor extat quo ſatis certo auctore ſtetur.* Tit. Liv. Hiſt. Lib. VIII. Cap. 40. *Cicero*, ſays the ſame thing preciſely as *Livy*. Theſe Funeral Orations have contributed greatly to falſify our Hiſtory; for how many things have they not invented, which never happened? How many fictitious Triumphs? How many falſe Origins of Families? How many *Plebeians*,

or from one they have no juſt Claim to. If Hiſtorians were more careful in the Defence of Truth, they would vigorouſly oppoſe theſe fabulous Stories. But for one that lays open Error and Falſhood, there are twenty that follow the Torrent, and conform themſelves to popular Opinions. But whatever the Credulity of ſome Writers may be, it ought not to determine our Conduct, nor make theſe Sentiments of the Vulgar reſpected by us, which have only erroneous Antiquity for their Foundation. We run great Riſk of bewildering ourſelves by following ſuch bad Guides *. *Pliny* the younger ſays, that he conſulted only a few ſelect Perſons; and did not accommodate himſelf to the Taſte of the People. *Horace* †, and many other great Men, have deſpiſed the Sentiments of the Vulgar. They ſeem to have a Life in Chimeras and lying Wonders, of which Tradition is the fruitful Source, and the greater is their Blindneſs, the more they contemn Reaſon, and are afraid to be enlightened thereby. Thus *Tully* ſays, that *Philoſophy is content with a few Judges; ſhe deſignedly ſhuns the Crowd, and is ſuſpected and hated by them; and that they who condemn and deſpiſe.*

beians have become *Patricians*, only becauſe they bore the ſame Name with ſome illuſtrious Family. As if, for inſtance, I ſhould affirm, that I deſcended from M. *Tullius* a *Patrician*, who was a Conſul ten Years after the Expulſion of the Kings. *Quenquam his laudationibus Hiſtoria rerum noſtrarum facta eſt mendatior. Multa enim ſcripta ſunt Eneis quæ facta non ſunt, falſi Triumphi, pluris Conſulatus, genera etiam falſa, & ad Plebem tranſitionis, cum homines humilioris in alienum ejuſdem nominis infunderentur genus: ut ſi ego me a M.* Tullio *qui* Patricius *Conſul Anno.* 10. *poſt Reges exactos fuit.* Cicer. in Brut. Cap. 16.

* Ego enim, non populum advocare, ſed certos electoſque ſoleo, quos intuear, quibus credam, quos denique & tanquam ſingulos obſervem, & tanquam non ſingulos timeam.

Plin. Epiſt. 17. *Lib.* 7.

† Non ego ventoſæ *Plebis* ſuffragia venor.

Hor. Epiſt. 19. *Lib.* 1.

deſpiſe her have always the Multitude on their Side *.

If that illuſtrious *Roman* had lived in our Times, he would have been ſoon convinced that the Multitude and common People are not only the Deſpiſers of Learning and Knowledge; he would have found Partiſans of Ignorance amongſt the Pontiffs and Senators, and ſtill a greater Number amongſt the Courtiers. His Aſtoniſhment would yet have been greater, if he had lived three or four hundred Years ago, and had ſeen that a Gentleman gloried in that he could write nothing but his own Name, and in thinking that Learning was a Diſparagement to his Birth. He would have found almoſt as much Ignorance amongſt the Clergy as amongſt the Nobility, and perhaps could not have ſeen ten Curates in *France* that could conſtrue the *Latin* of their Miſſal. It was in thoſe Times of Blindneſs and Credulity that the greateſt Part of the Traditions, that are now ſo ſhocking to Men of Senſe, had their Riſe and Origin. Although our Anceſtors had a mind to render Antiquity illuſtrious, it is to their Ignorance and implicit Faith that we are obliged for it. They were the Dupes of the Impoſtors of thoſe Days, and we ſhall be theirs, if we do not ſhake off the Yoke, which they have endeavoured to put upon our Reaſon.

SECT. XII. *Traditions, for the moſt part, are founded upon our Prejudices and our Lazineſs.*

IF we enquire how moſt of thoſe Things, that are handed down to us by Tradition, have happened; and how thoſe which are now in Vogue

* Eſt enim Philoſophi paucis contenta Judicibus; multitudinem conſultò ipſa fugiens, eique ipſi & ſuſpecta & inviſa, ut vel ſi quis univerſam velit vituperare, ſecundo id populo poſſit facere. *Cicer. Tuſcul.* II.

Vogue are like to be tranſmitted to Poſterity; we ſhall eaſily diſcover, that the Prejudices of our Youth, and a Lazineſs inherent to a great many Perſons, are the two principal Sources of the popular Opinions, pious Fables and romantic Stories which are told us, and whoſe Truth is fathered upon Tradition. There is nobody who has not experienced, that when he was young, he heard a long Train of Stories in his Family; whoſe Falſhood and Folly he has been ſenſible of ſince he grew up to Manhood.

All Mothers and Grandmothers have a thouſand pious Rhapſodies, and as many falſe Anecdotes of their Family, which they tattle in the Ears of their Children. They certify theſe lying Stories, with ſo much Aſſurance of Truth, that moſt People cannot but remember and believe ſome of them. When their Children are arrived to a certain Age, they tranſmit to them, what they again, in their Turn, take care to convey to Poſterity. Thus, from Age to Age, every Family perpetuates in their Deſcendants a certain Number of Lyes, which paſs for the Hiſtorical Chronology of the Houſe. Every Province, and every City has its particular Errors, and the People that live there are generally tainted with them. They communicate the Impreſſions that they receive in their Youth, and mutually fortify themſelves in their Belief, by the unanimous Conſent of all thoſe, to whom they are the neareſt allied. No body durſt undertake to undeceive them, in an Opinion which paſſes for a Rule of Faith amongſt them; and it would be running too great a Riſk to oppoſe certain Prejudices too vigorouſly. I heard a Friend of mine, a Gentleman of Probity and Credit, ſay, that he had like to have been

pulled

pulled in Pieces by the Populace of *St. Maximin* *, for ſaying that *Mary Magdalene* never came into *Provence*, and that it was not her Body that was preſerved in their Church. What do you think it is, Madam, that ſo throughly perſuades the Inhabitants of *St. Maximin*, that they poſſeſs the Reliques of *Mary Magdalene?* It is the Monks who belong to that Church †, and amaſs great Riches by that Story. I do not enter into a Diſcuſſion of the Fact, whether or no *Mary Magdalene* died in *Provence* ‡, or in *Judea*; But I aſſert, that let the thing be as it will, the Monks have great Reaſon to maintain, than they have her Reliques. How many pious Traditions have no other Source, no other Support, that the private Intereſt of ſome particular Perſon? How many Errors and Superſtitions would be baniſhed from the Earth, could one baniſh Self-Intereſt and the Love of Riches?

Lazineſs

* A ſmall Town in *Provence*.

† *Inde furor vulgo quod numina vicinorum*
Odit uterque locus, cum ſolos credat habendos
Eſſe deos, quos ipſe colit. --- Juvenal Sat. XV.

‡ *Pere Hardouin* has ridiculed this Fable, invented by the Avarice of the *Dominicans*, in the Examination which he made, of the pretended Impoſture of *Joinville*. It were to be wiſhed that this Jeſuit had never imployed his Learning, but in diſcrediting Fables ſo manifeſt, and not in detracting from every thing that is moſt valuable in Antiquity. Conſult on this Occaſion *the Third and Fourth Tome of Cabaliſtick Letters, and the Fourth Part of the Secret Memoirs of the Republick of Letters*, wherein I have ſpoken at large of the Syſtem of this Jeſuit. What follows is his Aſſertion concerning the Queſtion in Debate. The King --- made a Viſit to the City of *Aix* in *Provence* to the Honour of St. *Mary Magdalen* --- and we ſaw the Place at *Baſme* on a very high Rock, where they affirmed that Saint lived as a Hermit a very conſiderable Time. *Atqui conſtat Dominicanos ipſos non niſi Anno* 1279. *die* 4. *Decembris inventum ibi diſcere Corpus S.* Magdalenæ *novem annis ipſis poſt obitum S.* Ludovici. *Et ex illa haud dubie inventione cœpit credulitas, quæ poſt ea paulatim crevit.* Harduini *Opera varia antiq; numiſmat. Reg.* Franc. *in Hiſt.* Joinvillæi *Obſervat. quædam.* p. 636. Col. 2.

Lazineſs and Indolence, Vices ſo common to the greateſt Part of Mankind, are alſo great Upholders of Tradition. Men had rather believe a Thing that is told them for a Truth, than prove whether it be ſo or no, by a fatiguing Examination, or painful Study. It is much more eaſy to follow the Current of Things. Thus moſt People ſuffer themſelves to be carried by the Stream, and are ingulphed in Error from the Examples of others. Whoever has a mind to be cured of his Blindneſs, muſt follow the Precept of *Seneca* *, and ſeparate himſelf from the vulgar Crowd.

SECT. XIII. *Many Traditions take their Riſe from the Works of the Poets, Orators, and Painters.*

IF we examine into the firſt Origin of many Traditions, we ſhall ſee, that they often ſpring from ſome accidental Thought of a Poet or Orator. *Homer*'s Gods were the occaſion of all the fabulous Stories, which were invented from time to time on that Subject among the Pagans. As ſoon as the Mobile receive the firſt Impreſſion of any Superſtition, they are continually adding new Chimeras to the firſt; and all thoſe Stories, paſſing to Poſterity, gain great Authority by length of Time, in the Minds of the Weak and Ignorant. Nay, in proceſs of Time there will be Authors found, who by their Writings will authorize the falſe Traditions, and record them in their Books as certain Facts, that have been acknowledged as Truths for many Ages. In ſpite of the Remonſtrances, that *Dido*

* Unuſquiſque mavult credere, quam judicare; nunquam de vita judicatur, ſemper creditur, verſatque nos & præcipitat traditus per manus Error, alieniſque perimus exemplis. Sanabimur, ſi modò ſeparemur à cœtu. *Sen.* de Vita beat. Cap. I.

Dido makes in *Auſonius* *, concerning the imaginary Paſſion the Poets charge her with in favour of *Eneas*, there are Authors in our Times, who have undertaken to demonſtrate, that *Virgil*'s Narration is founded upon a poſitive Truth, and not a Fable invented to pleaſe. Many Hiſtorians thus authorize Facts, which never had any Reality but in the Poet's Brains, who are permitted to forge and invent Facts †, or alter the Truth to ſerve their Purpoſe.

There are beſides a great many popular Notions, and ancient Traditions, that have no other Foundation than the Imagination of the Painters. In the Times of Ignorance, from the ninth to the fifteenth Century, the Monks had very few Churches, but what had the Image or Effigy of ſome Saint, that wrought miraculous Things. Theſe Images were the moſt certain Revenue and ſupport of Convents and Monaſteries. Reaſon and Learning, which appeared again, after they had been ſo long diſuſed, had the ſame Effect upon theſe pretended Miracles, that the coming of the Meſſiah had upon Oracles; they made them ceaſe: and many People beginning to open their Eyes, and perceiving the Credulity of their Predeceſſors, came to be intirely cured of their Error. Yet for all this, a great Number ſtill continued in the ancient Belief, either through Obſtinacy not to ſee the Truth, or becauſe their Prejudices hindered them from making uſe of their Reaſon. They retained in their Minds all the fooliſh Fancies that took Place in their Youth,

* Vos magis Hiſtoricis, Lectores, credite de me,
Quam qui furta deum Concubituſq; canunt.
Auſon. de Didone.

† ---- Pictoribus, atque Poetis,
Quidlibet audendi ſemper fuit æqua poteſtas.
Horat. de Arte Poet.

and tranſmitted them to their Poſterity, from whence they are deſcended to us. This was the Riſe of a thouſand odd Notions, which have been often hunted down of late Times, but are not yet quite deſtroyed. From the ſame Source ſprung many of the pious Superſtitions, that the Prudence and Wiſdom of our late Biſhops have cauſed to be laid aſide.

Orators *, and the Compilers of public Speeches and Panegyrics, have ſpread almoſt as many Errors amongſt Mankind as the Poets. As only Probability is expected from them, and they are at liberty to give a looſe to their Imagination, provided they do not run into the extravagant and romantic Stile, the monſtrous Encomiums, which they gave to their Heroes, have occaſioned many of the ſilly Stories, which are related of them. Every body adds ſomething to the Character drawn by the Orator, and theſe Encomiums that were only exaggerated at the firſt, become romantic by length of Time. Moſt of the Panegyrics upon the Saints are rather Poems in their Honour, than a plain Deſcription of their Virtues to excite the Imitation of the Faithful. A Preacher indulges his lively Imagination, and fills his Sermons with rhetorical Flowers, and new and ſprightly Turns of Wit; he captivates his Auditory, and diſcharges his Office with Applauſe; ſome Devotees, who hear him, amplify at Night in their Families the fine Thoughts of the Panegyriſt. Their Children afterwards tell theſe Things to others with ſome Improvements; and thus, in a little while, the Life of ſome Saint becomes by Tradition the Offſpring of twenty warm Imaginations.

SECT.

* Rhetori conceſſum eſt ſententiis uti falſis, audacibus, ſubdolis, captioſis; ſi modò veriſimiles ſunt, & poſſunt ad movendos Hominum animos qualicunq; aſtu irrepere.

Au. Gell. Noctes Attic. Lib. I. Cap. 16.

SECT. XIV. *All People have Tradition to authoriſe and ſupport their Errors.*

I Shall finiſh theſe Reflections, Madam, concerning the Uncertainty of Tradition, by remarking to you, that it has an Influence upon all People, and upon all Religions in the World. The *Mahometans*, the *Jews*, and the *Pagans* have Traditions, which they believe to be certain and true; theſe are upheld, as ours are, by Antiquity and a religious Superſtition. Why ſhould we make ours more authentic than theirs? And what Reaſons have we to urge, that they ſhould quit their Notions, and ſeriouſly examine whether or no they are not contrary to Reaſon and good Senſe, ſeeing we refuſe to obſerve the ſame Rule? One Law ought to bind us all. We ought not to require that of others, which we are unwilling to ſubmit to ourſelves. If we think ourſelves exempt from examining our Sentiments and Opinions, that are founded upon Tradition, or certain religious Principles, the *Turks* and *Jews* ought to enjoy the ſame Privilege. There is no room to doubt, but that in all Religions there are ſome People of Sincerity, who believe that only which they profeſs, becauſe they are perſuaded that all others are wrong. Now, if the Means of Examining Opinions be forbid, a *Turk* is no more obliged to explain his Sentiments than we are; and this forbidding to examine into Opinions, which we receive by our Education, has plunged all Nations as well as our own into the Belief of falſe Prejudices. By this means, Religion is made the Protectreſs of Old-Wives Fables and Monkiſh Inventions. Truth needs never fear clear Day-light. If an Opinion grounded upon Tradi-

tion be true, it becomes the more venerable, when it is acknowledged and approved by People, who will not countenance a Lye. I cannot put an end to theſe Reflections better than by reciting a Paſſage from a famous Author, who proves evidently, that Tradition is too weak, uncertain and doubtful to clear up the Truth of a conteſted Fact. *The Pagans* *, ſays this judicious Writer, *inſulted over the firſt Chriſtians, on account of the ſmallneſs of their Number, and oppoſed to them their Antiquity, and the general Suffrage of innumerable Nations. The Church of* Rome *made uſe of this Artillery againſt* Luther *and* Calvin. *The Proteſtants make uſe of the ſame againſt every new Sect, that ſprings up amongſt them. This is a very eaſy Method of refuting Innovations. By this a tedious Courſe of Controverſy is cut ſhort. This way of Preſcription ſpares all the Fatigues of an Examination. For People will let go Enquiries, even with regard to a Point of Fact, on the Authority of Antiquity, and a long ſuppoſed Uſage. They fall in plum with the public Voice. All this indulges human Lazineſs vaſtly; and therefore Men defend themſelves with this Argument on all Occaſions; and for once that it may be of any ſervice to Truth, it is an hundred times the ſupport of Falſehood.* Complaints have been made in all Ages of the ill Effects of a blind Credulity, which truſts only to fabulous Traditions. *Lucretius* † ſaid eighteen hundred Years ago, that Mankind was oppreſſed under the heavy Burden of Superſtition; many have ſince his time; and many complain of the ſame thing ſtill.

SECT.

* *Bayle*'s Continuation of his Thoughts upon Comets. Tom. I. p. 144.

† *Humana ante oculos fœdè cum vita jaceret*
In terris oppreſſa gravi ſub religione. Lucret. Lib. ver. 63.
Add to this Paſſage, which is at the End of his firſt Book,
Tantum Religio potuit ſuadere malorum!

SECT. XV. *Of the Uncertainty of the Authority of the Learned, occaſioned by the Contrariety of their Opinions.*

THE Authority of the Learned, and the Reputation they have acquired, ought not to impoſe upon our Reaſon. Great Men have always been ſubject to human Failings, and many times erred from the way of Truth. Their Paſſions, Prejudices, Vanity, and Self-Intereſt have been the Source of moſt of their Opinions. For this Cauſe, Madam, we ought to examine their Opinions with care, and try them by the Rules of the Light of Nature; and ſee whether or no they be not contrary to Reaſon, before we adopt and receive them as true. By reading good Books in this manner we ſhall make a real Improvement, and though they demonſtrate to us evidently but a few Things, yet theſe few Things will be more ſervice to us, than a great Number of Facts advanced without any eſſential Proof. The Difference that reigns amongſt the Opinions of the Learned, and their mutual Oppoſition to one another, is the grand Proof of their want of Evidence. No ſooner has an Author printed his Works, but a Critic ſtarts up, and attacks many of his Poſitions; and if he does not demonſtrate them to be evidently falſe, he leads his Readers, by the Doubts he raiſes, into ſuch a Dilemma, that they cannot pronounce in Favour of either Side, or determine the Affair in Queſtion. It ſometimes happens, that a third Perſon interpoſes, and condemns the two Diſputants, and reproaches them with not underſtanding the Subject they treat of. This occaſions freſh Doubts in the Readers, a new Trouble to thoſe that ſeek for Information, and a further Embarraſs to ſuch

as love to diſcover the Truth. We often ſee one and the ſame Author extolled by ſome great Men, and as much exploded by others; and thoſe who cry him up, charge their Opponents with want of Penetration to diſtinguiſh the Excellencies of a Book, which has procured him the Approbation of the beſt Judges.

Montagne's Works were highly valued in his own Time, and he had been in peaceable Poſſeſſion of a good Reputation as an Author for almoſt a whole Century. Two *Janſeniſt* Writers of a great Genius thought they diſcovered in his Works, ſome Notions that were injurious to Religion. They condemned them without reſerve, and criticiſed them without Mercy; which for ſome time ſeemed to leſſen the Eſteem, which his Works had procured him. A great many came over to the Opinions of the *Janſeniſts*. The Meſſieurs of *Port Royal* in a Body approved of their Deciſions, and ſeveral *Pariſians*, and even ſome that belonged to the Court, adopted their Sentiments. Upon this, an Author, well known for the Exactneſs of his Judgment *, took *Montagne*'s Part, who was not in a Condition to defend himſelf; he cenſured and criticiſed the two *Janſeniſts*, and the City and Court re-aſſumed their former Opinion, and People came over to *Montagne* again, and reſtored him the Reputation that he had been robbed of.

Monſieur *Bayle* without Controverſy was one of the greateſt, fineſt, and moſt elevated Ge-

niuſes

* Two Writers, in their Works, have cenſured *Montagne*, whom I do not think, no more than they do, free from all Faults. It appears to me that both of them have made a very wrong Judgment of him. The one did not think enough to reliſh an Author, who thinks much. And the other thought too ſubtilly to make uſe of Thoughts to his Purpoſe, of ſuch a delicate Turn. *La Bruyere*'s Characters. p. 1[illegible]

niuſes; yet there are ſome Perſons *, who have acquired a great Fame in Literature and the Sciences, who would make you believe, that he only knew a little Hiſtory and Carteſianiſm. Speak to a Jeſuit of *Paſcal*, and he will tell you, that *Paſcal* was but a trifling Philoſopher. When you praiſe *Bourdaloue*, a *Janſeniſt* will tell you, he does not merit it. I know that the Hatred, that is between different Parties may ſometimes occaſion this Difference in Opinions; but it happens moſt commonly between Authors of the ſame Belief, and whoſe Intereſts are reciprocal. *Arnaud* has writ a good many Things againſt *Mallebranche* †; *Scaliger* and *Eraſmus* had a ſharp Diſpute about a trifling Subject ‡, and after many Altercations on both Sides, a third Perſon of great Learning accuſes them of having carried on a frivolous Controverſy, and of not ſeeing that they were both in the Right; ſo far were they blinded by their Prejudices and Animoſity.

SECT. XVI. *That learned Men are always prejudiced in Favour of their own Opinions.*

VAnity and Pride, the Vices to which Authors are uſually attached, make them often embrace and maintain Opinions, which they know to be erroneous, and which they defend

* *Jurieu* and *Le Clerc*. See the ſhort View of the Maxims of Morality, and the Principles of Religion.

† Amonſt other Pieces, Monſieur *Arnaud* writ one againſt *Mallebranche* concerning the Ideas, by which we ſee all Things in God, intituled, *Of falſe and true Ideas*; printed at *Cologn* in 1683 in 12mo.

‡ The Diſpute of *Scaliger the Father* with *Eraſmus*, concerning his *Ciceronianus*, got him no Reputation. He acknowledged his Error before he died. See the *Scaligerana* under the Word *Eraſmus*.

only becauſe they have inſenſibly entertained them; and that they cannot bear the Shame of denying and diſowning a Propoſition which they advanced in Warmth of Diſpute, or admitted too raſhly into their Writings. They do not ſeem to perceive that it would be a hundred times more reputable for them to acknowledge that they are miſtaken, than to endeavour to juſtify an Error by adding more thereto. They write Volumes, and by the Help of a Number of Sophiſms, they at laſt embroil the Truth. How many bad Books would never have exiſted, if the Authors had conconſidered that it is the Lot of human Weakneſs to commit many Faults, and that it is the Duty of Philoſophers to find them out and acknowledge them? One may very well apply to conceited and prejudiced Writers, that will not retract their Errors, what St. *Auſtin* ſays of Sinners: *Humanum eſt peccare, diabolicum perſeverare.* I know nothing indeed ſo diabolical and pernicious to good Learning and the Sciences, as the Conceit and Pride of ſome learned Men; theſe Vices are as deſtructive now of the liberal Arts, as the Fury of the *Goths* and *Vandals* was formerly. The Fondneſs, that learned Men have for a Syſtem that they have invented, or which they have ſtudied under favourite Maſters, vaſtly leſſens alſo the Authority of their Opinions. They ſeem to yield a ſort of Divine Submiſſion to one Set of Notions. If you offer a *Carteſian* a Propoſition, that does not agree with his prejudiced Principles, he is leſs ſolicitous to examine, whether or no what you ſay to him be conformable to Reaſon, than to conſider how to oppoſe you. If you would convince a *Peripatetic* of any Error, he immediately reflects that his Reputation is linked with *Ariſtotle*'s; he defends his own Cauſe, by

by defending that of his Maſter; and far from ſearching what Truth there is in his Adverſary's Arguments, he only ſtudies for Anſwers to elude them; he thinks there can be no Error in the peripatetic Philoſophy, and never queſtions but that he has always Reaſon on his Side. Thus he diſpenſes with examining into the Truth of a Fact, and is wholly employed about the Proofs of it; he gives no Attention to what is ſaid on the other Side of the Queſtion, and makes it impoſſible, by his Prejudices, to be ever certain of the Truth.

Divines and Philoſophers are very ſubject to theſe Failings. Obſtinacy in Opinion ſeems to be their peculiar Attribute, and a Conſequence of their Profeſſion. It is this Fondneſs for their own Sentiments, and this miſtaken Certitude of their Syſtems, that engaged *Bayle* * to demonſtrate the Falſhood of ſo many Principles which were looked upon as certain. He took a Pleaſure in ſhewing, that a great many Things, which we are taught to believe to be ſelf-evident, are ſurrounded with Difficulties, which render them doubtful, and ſometimes contrary to the moſt plain Senſe and Reaſon.

* 'Bayle had a mind to mortify human Reaſon; at leaſt, 'to deter it from paſſing raſh Judgments and adopting Opinions, 'without a previous Examination and Proof of them. He 'thought Divines were too deciſive, and that it was to be 'wiſhed, that doubtful Things were ſpoken of in a doubtful 'manner. With this View, he took a ſpiteful Pleaſure in 'mortifying their Aſſurance, and ſhewing them, that cer-'tain Truths, which they looked upon as evident, were ſur-'rounded and darkened with ſo many Difficulties, that it would 'ſometimes be the prudenteſt way to ſuſpend their Judgments 'about them. He had alſo diſcuſſed ſo many Facts, which 'are never queſtioned by the generality of the Learned, and 'which he had found to be evidently falſe, that he diſtruſt-'ed every Thing, and gave no Credit to Hiſtorians, but with 'a Proviſo, and in Expectation of further Proofs.'

Beauval's Hiſtory of the Works of the Learned, *Dec.* 1706.

SECT. XVII. *Of the ridiculous Opinions held by ſome learned Men.*

IT is aſtoniſhing to ſee what extravagant Notions many of the Learned entertain. If we did not know that they pretended that their Writings were looked upon as containing evident Truths, one would be ready to ſay, that they were only Fictions and Romances made at pleaſure, by Perſons who had a mind to give a free Career to their Imagination, and entertain the Public with the Chimeras and Oddneſſes that their Fancy invented. Yet it is with a magiſterial Gravity that Philoſophers ſet off their Whims. Attend to a *Stoic* diſcourſing of Wiſdom, and of the *ſummum bonum*, and you would ſay, that he is perſuaded that the whole World ought to adopt his Sentiments. There is nothing more pleaſant than to ſee him ſweat, to prove that the wiſe Man only (which according to his Syſtem is the Philoſopher) is truly happy, always free, though a Gally-ſlave; as beautiful as *Cupid*, though he be as ugly as *Vulcan*; rich in Poverty; and in vigorous Health, under a Complication of Diſtempers. Ideas ſo falſe, and which can only ſpring from Vanity, are uſually ridiculed by Perſons of good Senſe, who have no Goût for theſe wild Fancies, and cannot believe, that a Man under the Preſſure of Sickneſs, Pain, and Misfortunes, ſits on the Pinnacle of Happineſs. *Horace* * making himſelf merry with the Vanity of the Stoics, to whoſe wiſe Men he grants all the Qualities and all the Advantages, which they attribute to him, adds, that he always enjoys perfect Health, excepting when

* Ad ſummum ſapiens uno minor eſt Jove, dives,
Liber, honoratus, pulcher, Rex denique Regum,
Præcipuè ſanus, niſi cum pituita moleſta eſt. *Hor.*

when he is troubled with a Defluction of Rheum in his Head, which wholly deſtroys the Happineſs of this Terreſtrial Deity.

However ridiculous certain Opinions of the *Stoics* might be, they fall far ſhort of the Abſurdity of ſome that were held by the *Pythagoreans*. What Folly, or rather what Impudence, muſt a Man be poſſeſſed of, who teſtifies with great Aſſurance, that he remembers to have been in three different Bodies? and affirms, that his Name was *Euphorbus* *, when his Soul animated a *Greek*, who was at the Siege of *Troy*. Can the Mind of Man be guilty of greater Extravagance? And yet the Author of theſe monſtrous Imaginations had acquired ſuch an Authority amongſt his Diſciples, that without examining the Truth, or even Poſſibility of his Opinions, they received them with an implicit Submiſſion; and when any Perſon undertook to ſhew them the Falſity or Abſurdity of them, they nonſenſically and ridiculouſly anſwered *Magiſter dixit*, our Maſter has ſaid it is ſo and ſo. Judge, Madam, whether or no the Diſciples of this Philoſopher took a proper way to come at the Truth, or whether by the blind Confidence they repoſed in their Maſter, they were not in a manner bewitched. They always were ſo, and ſtill are ſo, who oblige themſelves to follow blindfold the Tract of any particular Authors, however learned they may be. They naturally imbibe the Errors of their Maſters, and let them be ever ſo palpable, Prejudice hinders them from perceiving it; for there is nothing ſo abſurd †, nothing ſo contrary to good Senſe, but what has been maintain-

* Ipſo ego, (nam memini) Trojani tempore Belli
Panthoïdes Euphorbus eram. *Ovid* Met. Lib. 15.

† Nihil tam abſurdum dici poteſt, quod non dicatur ab aliquo Philoſophorum.

ed by ſome of the Philoſophers. I am aſhamed, ſays St. *Auguſtine*, writing againſt certain Syſtems, to relate ſuch abominable Stuff; and I cannot imagine how thoſe who writ it were not covered with Confuſion. I pity, adds this Father of the Church *, all ſuch as are under a Neceſſity to hear this infamous Traſh.

Philoſophers often fall into monſtrous Errors by being too inquiſitive. By endeavouring to diſcover Myſteries which are impenetrable they give into extravagant Notions, and become the Dupes of their own heated Imaginations. Divines alſo, who hunt only after Fantoms, frequently tumble into this Trap. As the Subjects, which they beat their Brains about, are above the Reach of meer human Underſtanding, and which Faith alone can eſtabliſh and authoriſe; whenever they attempt to reduce them to the Philoſophical Standard, the Impoſſibility that they find in making certain religious Principles accord with Reaſon and the Light of Nature, makes them invent a thouſand ridiculous Syſtems, from whence all the Errors and Diſputes ſpring, which have for ſo long a time cauſed Diviſions amongſt Mankind.

When a Man takes it into his Head to unravel incomprehenſible Myſteries, Learning only ſerves to lead him the more aſtray. It furniſhes a Man with Sophiſms againſt itſelf. *What Difference is there*, ſaid *Montagne* †, *between the moſt ſubtle Folly, and the moſt ſubtle Reaſon? There is but a Hair's Breadth between them.* This Author ſeems to me to think juſtly. The greateſt Men have fallen into the greateſt Errors. *Tertullian, Origen,*

* Sed jam pudet me iſta refellere, cum eos non puduerit iſta ſentire. Cum verò auſi ſint etiam ea defendere, non jam eorum, ſed ipſius generis humani me pudet, cujus aures hæc ferre potuerunt. *Auguſt.* Epiſt. 66.

† *Montagne*'s Eſſays, Lib. II. pag. 189.

Origen, and great many bright Genius's of the firſt Ages of Chriſtianity, were carried away by the Torrent of their Imaginations, and plunged themſelves into erroneous Sentiments. St. *Auguſtine* is even accuſed of puſhing Things too far ſometimes, according to the different Sects againſt whom he writ. Yet all the contending Parties, that are now uppermoſt, fail not to defend themſelves by Arguments taken from his Writing. It is my Opinion, and I am firmly perſuaded of it, that Reaſon and good Senſe will always be too hard for meer Learning. *Out of the Light of Nature and ſound Reaſon there is no ſafety**. I alway have Recourſe to this Principle to decide the Evidence of every Fact, againſt which, what is the Authority of all the Doctors in the Univerſe?

SECT. XVIII. *A great part of the Opinions of the Learned is owing to their Hatred and Jealouſy.*

THE Paſſions have a very great Influence over the Opinions of the Learned. They think certain Performances good or bad, according as they love and eſteem the Authors of them. Though a learned Man may be perſuaded, that a Book is a very good one of the kind, yet he very often does not fail to criticize it. He ſeeks for Faults in Places that ſeem to him to be the leaſt correct; and endeavours to undervalue the Excellence of thoſe, that are Proof againſt the moſt ſevere Criticiſms. He does not love him that writ the Book; that is enough for him to condemn it.

Your

* Et veniunt hæderæ ſponte ſua melius:
Surget & in ſolis formoſius arbutus antris,
Et volucres nulla dulcius arte canunt.
Propert. Elegiar. Lib. I,

Your ordinary Authors are not the only ones who are ſubject to theſe Weakneſſes. Writers of the firſt Claſs are guilty of this Miſconduct. We muſt allow the Biſhop of *Meaux* * the Character of an excellent Author, and yet no body was more a Slave to Envy, Hatred, and Jealouſy. Theſe Paſſions made him criticiſe Works, which merited the Eſteem of all good Judges, and which he himſelf allowed to be excellent. The Quarrels that he had with Mr. *Fenelon*, the Archbiſhop of *Cambray*, made him write a Piece againſt *the Adventures of* Telemachus. He many times attacked Performances, whoſe Juſtneſs, Beauty, Exactitude and Connection he would have been the firſt in commending, if he had the Poſt that Mr. *Fenelon* obtained to his Prejudice. This ſame Biſhop of *Meaux*, whom *Bruyere* † calls a Father of the Church, laid an Information before the Faculty of Theology in *Paris* againſt Mr. *Du Pin's Bibliotheque des Auteurs Eccleſiaſtiques*, becauſe he was vexed that that Author's ‡ Commentary upon the *Pſalms* had been better received by the Publick than his own.

Monſieur *Paſcal* and all the *Janſeniſts* declaim againſt the *Jeſuits*, and they in their Turn againſt the *Janſeniſts*, only from a Spirit of Jealouſy. The Society did not like to ſee the riſing Glory of *Port-Royal*, and the growing Reputation of the *Jeſuits* diſpleaſed the *Janſeniſts*. *Quenel's New Teſtament*, which was ſo much talked of at firſt, and

* *Boſſuet.*

† Parlons d'avance le Langage de la Poſterité ; un Pere de l'Egliſe, *&c.* *La Bruyere*'s Harangue at his Reception into the Academy.

‡ Liber Pſalmorum, in quo eorum ſenſus literalis exponitur. *à Lud. du Pin, Pariſiis* 1691 in 8vo.

Libri Pſalmorum Verſio duplex Latina, una S. Hieronymi, altera Vulgata cum Notis Jac. Benigni Boſſuet.

Lug. 1691. in 8vo.

and was ſo tenaciouſly defended, was approved of, extolled and received with great Applauſe when it was firſt publiſhed, by many of thoſe who condemned it afterwards.

Paſſion has not only an Influence over the Opinions of private Perſons, but it alſo directs the Deciſions of Univerſities and the moſt auguſt Aſſemblies of the Learned. I beg, Madam, you will be pleaſed to conſider the following Words of a Doctor of the *Sorbonne*, who ſpeaks of the Behaviour of his Brethren. *The Condemnation of Monſieur* Arnaud, *made contrary to all our Forms, is the greateſt Wound our Faculty ever received; it is the moſt terrible Eclipſe that bright Luminary ever ſuffered; it was ſuch a Piece of Roguery, that moſt of our Doctors, who now view Things in cool Blood, frankly confeſs that it may be juſtly called* HORRENDUM SACRÆ FACULTATIS PARISIENSIS LATROCINIUM *. And yet, with that Author's Leave, this was not the greateſt Eclipſe the *Sorbonne* has ſuffered. Their Glory was a hundred times more tarniſhed by the Decree they had the Inſolence to make againſt King *Henry* the Third in 1589. But this bright Luminary is frequently ſubject to be eclipſed; and its illuſtrious Body is governed very much by the Paſſions of the different Parties that compoſe it. Thus they have the Vexation ſometimes to ſee their Deciſions diſapproved, in many Nations, by a great Number of the Learned. The Condemnation that the *Sorbonne* made at the Beginning of this Century, of ſome Propoſitions of Father *le Comte* the *Jeſuit*, which were all reduced to this ſingle Point: *That the* Chineſe *had preſerved*

* An Account of the Aſſemblies of the *Sorbonne* upon the Opinions of the *Jeſuits* concerning the Religion of the *Chineſe*. Lett. V. p. 22. 1701.

ed for ſome time the Knowledge of the true God, was declared unjuſt and falſe by near a hundred *Spaniſh* Doctors, Seculars and Regulars of every Order; almoſt all Profeſſors in Theology, Fathers Inquiſitors, or dignified Clergy *. You ſee, Madam, that what is approved of on the other Side the *Pyrenees*, is condemned on this by Doctors who are of the ſame Religion, who believe the ſame Articles of Faith, and participate of the ſame Communion.

This Difference of Opinions may ſeem ſtrange to thoſe that do not know the underſide of the Cards; but as ſoon as they are informed that the Hatred of the *Sorbonne* againſt the *Jeſuits* occaſioned that Condemnation in Part, and that the Deciſion of the *Spaniſh* Divines was procured by the Credit that the Society had in *Spain*, they will no longer wonder at that Contrariety of Opinions. A Doctor of the *Sorbonne*, deſcribing what paſſed in the Aſſembly, that condemned Father *le Comte*'s Propoſitions, expreſſes himſelf thus; *one would ſay, that they met in the Hall of the* Sorbonne *only to make a Noiſe, and abuſe one another. Their Words, Geſtures, Winks, Stile, and manner of giving in their Suffrages are all unworthy of the Gravity of thoſe, to whom we give by way of Excellence, the Title of* Nos tres ſages Maîtres. *What can the Court, the Parliament, and the Magiſtrates think of a Judgment, that paſſed in the Midſt of ſuch a Tumult* †? If one may Credit the Account of this Doctor, concerning the manner in which his Brethren examine Things, the Deciſions of the chief Divines in the Kingdom are very much like thoſe

* The Judgment of a great Number of Doctors of the Univerſities of *Caſtille* and *Arragon*, concerning the Propoſitions cenſured by the *Sorbonne*. Pag. 20.

† The Hiſtorical Journal of the Aſſemblies held in the *Sorbonne* to condemn Father *le Comte*'s *Mémoires de la Chine*.

thoſe at the Elections of Sheriffs in Towns, where Affairs are managed by two enraged Factions; and I am of Opinion that in theſe Cabals, the Divines are no more ſolicitous for the Prevalency of Truth, than noiſy Electors are for the good of their Country.

SECT. XIX. *The Difference of Religion carries learned Men to vicious Extremes.*

THE Diverſity of Religions is alſo one of the great Cauſes of the Difference of Opinions amongſt the Learned*. The Writers in Con-

* I ſhall give here a deciſive Example of this Difference of Sentiments, cauſed by the Difference of Religions. I ſhall take it from the Oppoſition between two known Hiſtorians: The firſt is *Pere Orleans*, Author of the Revolutions of *England*; the ſecond is *Rapin Thoyras*, Author of the Hiſtory of the ſame Kingdom. If *Pere Orleans* is to be credited, *James* the Second was a juſt, equitable, mild, merciful King, who did not approve of certain Rigours a little too ſevere, which was exerciſed by two or three of his Partizans. Let us hear the *Jeſuit* ſpeak, let us weigh his Expreſſions well. 'The unfortunate Duke of *Monmouth* was put into the Hands of the 'Judges, who condemned him to Death, which he ſuffered 'publickly at *London* the 25th of *July*: he was more weak 'than wicked; but by his Weakneſs he was capable of the 'greateſt Faults. Some Days before he was taken, *Grey* was 'likewiſe taken in Diſguiſe: the King was ſo merciful to 'him, that it raiſed a Suſpicion he had betrayed his Party. 'Many others were puniſhed, and the Number was greater 'than the King intended. They accuſe the Severity of Judge '*Jefferies*, afterwards Lord High Chancellor, for the Cruelty 'of Colonel *Kirk*, and for the Avarice of the Commiſſioners in 'general, who were appointed to put in Execution the Seve-'rity of the Laws, or the Mercy of the King; for it is ſaid 'that the Nature of the Crime committed was not the Mo-'tive of the Puniſhment or the Indulgence; that thoſe who 'were leaſt able to purchaſe their Pardon ſuffered moſt, and 'that if many People loſt their Lives, it was becauſe there were 'but few who could find Money enough to redeem them. 'The King had Notice of this Diſorder but too late, for as 'ſoon as he heard of it, he ſhewed his Indignation; and if 'the important Services which the accuſed Perſons had done 'for

Controverſy take a Pleaſure in oppoſing one another in the leaſt Trifles, even in Things that no ways

'for the King, obliged him to ſpare them, he made amends 'for their Injuſtice, by a general Pardon which he granted 'to thoſe of the Rebels, who were ſtill in a Condition to par- 'take of his Clemency.' Hiſtoire Rev. de *Angleterre*, Tom. III. p. 363. Edit. de *Amſterdam*. Let us now ſee how *Rapin* confutes *Pere Orleans*, by evident Proofs, that the *Nero's* and *Caligula's* did not commit Actions ſo cruel as thoſe of King *James*'s Officers. This mild and merciful Prince was more revengeful than *Tiberius*; and what is ſtill worſe, the King rewarded theſe unheard of Cruelties with the higheſt Offices of the Kingdom. After this one may eaſily judge of all Hiſtories, wherein the Zeal for their Religion is ſtronger than the Love of Truth. How many Writers are there who have ſufficient Greatneſs of Soul, to write the Truth at the Expence of their Party and their Faith to which they are attached? For one *De Thou* how many *Maimbourgh's* and *Pere Orleans's* are there? But let us come to the Paſſage of *Rapin*, and weigh all his Expreſſions. 'Mrs. *Liſle*, the Widow of Lord *Liſle*, 'one of the Judges of King *Charles* I. was brought into Court at '*Winchester* to be tried. Her Crime was for harbouring a 'Preſbyterian Miniſter in her Houſe, who ſided with the Duke 'of *Monmouth*, and another Man to her unknown, and whoſe 'Name was not in any Proclamation. Upon hearing her De- 'fence the Jury brought her in not Guilty; but *Jefferies* obliged 'them to go back to reconſider their Verdict. The ſame 'thing happened three Times; but *Jefferies* threatning to hang 'them upon the Spot, the fourth Time they brought her in 'Guilty, and ſhe was executed at the Age of Fourſcore. At '*Dorcheſter Jefferies* to ſave himſelf ſome Trouble, told thirty 'of the Rebels, that if they hoped for Mercy, it would be 'beſt to plead Guilty; but as they refuſed to take his Ad- 'vice, he condemned twenty-nine, who were immediately exe- 'cuted. In another Place two hundred Perſons were to be 'tried, and *Jefferies* promiſed an abſolute Pardon to thoſe that 'ſhould plead Guilty, and of theſe he hanged fourſcore. In 'ſhort, to paſs over a Relation which creates Horror, its ſuf- 'ficient to ſay, that at *Taunton* and *Wells*, *Jefferies* condemned 'five hundred, of whom there were two hundred and thirty- 'nine executed, which is the leaſt Account, and their Quarters 'were expoſed near the Highways. *Jefferies* congratulated him- 'ſelf for this Barbarity, and boaſted, that he alone had hang- 'ed more People, than all the *Engliſh* Judges together ſince '*William the Conqueror*. If he ſhewed Mercy to any, 'twas 'upon Account of their Riches, by which he was bribed. 'One Gentleman, whoſe Name was *Prideaux*, gave him 'fourteen thouſand Pounds to ſave his Life. As for thoſe who

ways relate to the Points in Diſpute. The Hatred that a Diverſity of Belief occaſions in the Hearts of

'who had not Money enough to ſatisfy *Jefferies*, they were 'either hanged, or cruelly whipped, or tranſported and ſold 'for Slaves. *Kirk* was not behindhand with *Jefferies* in 'Cruelty or Inſolence. Immediately after the Duke of *Mon-* 'mouth's Defeat, he was ſent to *Taunton*, where he hanged 'nineteen Men without any Trial, and without permitting them 'to ſee their Relations or Friends. During the Execution, 'the Drums, Trumpets and Hautboys ſolemnized this great 'Action. This doubtleſs rendered him a worthy Aſſiſtant of '*Jefferies*. In the ſame Town of *Taunton*, *Kirk* invited ſeveral 'Officers to Dinner, during which thirty condemned Perſons 'were hanged before the Window, ten at drinking the King's 'Health, ten at the Queen's Health, and ten at the Health 'of the Lord Chief Juſtice. But an Action which he was 'guilty of exceeds Imagination. A young Woman, coming to 'implore her Father's Life, he perſuaded her to proſtitute her-'ſelf, promiſing to ſave her Father's Life on that Account; 'but after he had ſatisfied his Brutality, he was ſo cruel as 'to take her to the Window, and ſhew her Father hang-'ing upon the Sign-Poſt. This diſmal Sight had ſuch an 'Effect upon the poor Girl, that ſhe loſt her Senſes. *Pere* '*Orleans*, inſtructed by *James* II. not being able to deny theſe 'barbarous Executions, he endeavoured to excuſe them two 'Ways. He ſays firſt, that the King had Notice of it too 'late to prevent it, and that the great Services *Jefferies* and '*Kirk* had done him, hindered them from feeling the Effects 'of his Reſentment. And in the ſecond Place he ſays, the 'King made amends for this Injuſtice as much as in him lay, 'by granting a general Pardon. But it is eaſy to ſee how 'frivolous theſe Excuſes are, when we conſider, that when '*Kirk* was reproached for his Barbarity, he anſwered, that 'neither he nor *Jefferies* went ſo far as they were authoriſed 'by the King's Commiſſion. Add to this, that the King 'was ſo little diſſatisfied with the Conduct of *Jefferies*, that at 'his Return he made him Lord High Chancellor, which be-'came vacant while he was actually employed in his Barba-'rities in the *Weſtern* Counties. As to the Pardon, it was 'not publiſhed till ſeveral Months after the Executions were 'over, and there remained no more Priſoners to try. The 'Court muſt needs be convinced, there were very few left who 'could reap the Benefit of the Pardon, ſince there was inſerted 'by Name, in the Act, many young Girls of ten or a dozen 'Years of Age, who went with Garlands of Flowers on their 'Heads, to preſent a Bible to the Duke of *Monmouth* when 'he entered into *Taunton*. It was not only the *Weſtern* Coun-'ties, that the King gave revengeful Marks of his revengeful

'Temper,

of Divines, with regard to divine Worſhip, or any other religious Topic, appears alſo in their Writings. To be convinced of the Truth of what I aſſert, you need only read Books of Controverſy. There are very few, if any, where the Authors do not open the Scene of Diſpute by ſome Invective againſt their Antagoniſts, or thoſe of their Religion. Our Divines, who have maintained a Controverſy with the greateſt Moderation, are Monſieur *Arnaud* and Monſieur *Claude*; and yet we might take away a great deal out of their Works to ſuppreſs every thing therein, that is contrary to the Rules of a polite Diſputation. As for Meſſieurs *Perron*, *Moulin*, *Nicole* and *Jurieu*, three Quarters of their Writings of Controverſy are not ſo much employed to clear up the Truth, as to wound their Antagoniſts with cutting Periods and Strokes of Wit. This laſt writes ſometimes like a Porter, and ſometimes like a fanatical Enthuſiaſt; the groſs Invectives with which he has filled his Books have made him deſpiſed by both Sides. In Matters of Controverſy it is hard to preſerve Decency, and next to impoſſible to write politely, and as becomes a Gentleman. Many of the ancient Fathers, notwithſtanding the pious and virtuous Qualifications aſcribed to them, have often fallen into this Error; they have left viſible Proofs in their Works, that however devout they might be, they were meer

'Temper, for the City of *London* was witneſs of ſeveral Exe-
'cutions in *October*; and among others, *Elizabeth Gaunt* was
'publickly burnt for furniſhing one of the Duke of *Mon-*
'*mouth*'s Party with means to eſcape. Six Men were exe-
'cuted as Traytors at *Tyburn*, for Crimes of the ſame Nature,
'and what is ſtill more ſtrange, ſome without ſufficient Con-
'viction'. *Rapin*'s Hiſtory of *England*. Here are two Paſſages, which evidently ſhew the Diſſimulation of Authors, in favour of Faults which tend to hurt their own Party, and hence it appears, how little one may depend on Jeſuitical Writers.

Men, ſubject to various Paſſions *, and too eaſily led to gratify themſelves by biting and abuſing thoſe they write againſt.

The Licence of propagating Slander by Books, occaſioned by the Difference of Religion, has not ſpared Perſons of the moſt exalted Stations. How many infamous Libels did the League cauſe to be diſperſed againſt *Henry* III. and *Henry* IV. of *France?* What Volumes, full of the moſt infamous Scandals, were writ againſt *Louis* XIV. by the Proteſtant Refugees? But that which is ſtill more ſurprizing is, that Perſons who paſs for Men of Probity, and the moſt primitive Candor, are guilty of this vicious Practice. It is ſaid Monſieur *Arnaud* writ a Book, intituled *Le veritable Portrait de* Guillaume Henry de Naſſau, *Prince* de Orange, in which that great Prince is called an *Abſolom*, a *Herod*, and a *Nero*. I cannot believe that ſo great an Author could ever proſtitute his Pen to compoſe ſuch a Work. Be that as it will, the Difference of Religion cannot juſtify the Want of Reſpects due to crowned Heads. And

* Among a hundred Examples which I might bring of the unbecoming Diſputes of the Fathers, I ſhall only mention that of St. *Auguſtine* and St. *Jerome*, concerning an officious Lye. They wrote Letters full of Invectives againſt each other: St. *Jereme* pretends, that in the Scriptures themſelves, there are officious Lyes. That is, that the Holy Ghoſt deceives for the good of thoſe to whom he ſpeaks; he maintains likewiſe, that St. *Paul*, writing about the manner of his withſtanding St. *Peter*, had uſed a Falſhood and Diſſimulation. If Injuries had rendered an Opinion probable, that of St. *Jerome* ought to have been made appear ſo; for this is all that can be ſaid of it. This Father ſeldom wrote againſt any one without abuſing him: he had a Quarrel with *Vigilantius*, and ſaid he was poſſeſſed with a Devil. *Spiritus eſt immundus qui hæc te cogit ſcribere*; he called him a Dog, *melior erit* Vigilantius *canis vivens quam ille leo mortuus*. In reality, this Method of ſpeaking, is not only unworthy of a Chriſtian, but of a polite and rational Pagan. The Readers, who have the *Secret Memoirs of the Republick of Letters*, may ſee what I have ſaid on this Subject, in the third Part of that Work. p. 313.

And it is rendering Religion deſpicable to cover with its Vail ſuch wicked Attempts. The *Romiſh* Religion is not the only one where an immoderate Zeal puts Men upon acting contrary to Piety and good Manners. The Proteſtants are not exempt from this Paſſion, ſo deſtructive to Civil Society. They fall ſometimes into the ſame Faults they reproach us withal; and maintain as furious Quarrels one with another, as they do againſt us *. The Spirit of Controverſy is in ſhort a ſort of Vertigo, which ſuſpends the Uſe of our cleareſt Ideas, and actually deprives us of our Reaſon.

SECT. XX. *The greateſt Part of the moſt learned Men have owned that they know but little.*

I Think, Madam, I have ſufficiently demonſtrated to you the Neceſſity you are under of making uſe of your Reaſon ſolely in Things which you find contrary to it, whether they be in Hiſtory, or Tradition, or the Works of the Learned. You will be ſtill the more convinced of the Truth of my Opinion, when I have ſhewn you, that the greateſt Part of the moſt learned Men have owned that they know very few Things thoroughly; and that their Writings contain more Conjectures than certain Truths. You will ſee that this Opinion of mine is confirmed by the moſt famous Authors. I may at firſt cite to you amongſt

* We are extremely mortified in that the powerful Cabal which Monſieur *Jurieu* had in the laſt Synod, has done him the Pleaſure to ſee Monſieur *Huet* ſuſpended ---- If things go on thus, no Inquiſition was ever more intolerable, and the *French* will become the Reproach and Jeſt of *Holland*; and all this *unius ob noxam & furias*, through the Fanatic and Enthuſiaſtic Humour of Monſieur *Jurieu*.

Bayle's Letters, Tom. I. p. 32

amongst the Moderns, *Montagne*, *La Mothe le Vayer*, *Gassendi* and *Bayle*, who have in a manner openly maintained *Pyrrhonism*. But in tracing these Things from their Original, and going back as far as *Pherecides*, the Father of all the Philosophers, I find the Ancients were as great Sceptics as the Moderns. See here what this *Greek* Philosopher writ to *Thales* his Disciple, a little before his Death *. *I have ordered my Heirs, as soon as they have buried me, to bring you my Writings. If you and the other Sages like them you may publish them; if not, destroy them. They contain nothing certain that satisfies my Mind; neither do*

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* Here is the Letter of *Pherecides*. Those who understand *Greek* and *Latin*, would not be sorry to read it in the Original.

Φερεκύδης Θαλῆ

Ἐν θνήσκοις, ὅταν τοι τὸ χρεὼν ἥκοι· νοῦσός με καταλελάβηκε δεδεγμένον τὰ παρὰ σέο γράμματα Φθειρῶν ἔβρυον πάς, καὶ με εἶχεν ἠπίαλος. ἐπισκήψα δ' ὧν τοῖσι οἱ ἱστῆσι, ἐπήν με καταθάψωσιν, ἐς σὲ τὴν γαφὴν ἐνέγκαι. σὺ δὲ ἢν δοκιμώσῃς σὺν τοῖς ἄλλοις σοφοῖς, οὕτω μὲν φῆνον. ἢν δέ οὐ δοκιμώσητε, μὴ φήνῃς. ἐμοὶ μὲν γὰρ οὔκω ἥνδανεν. ἔστι δὲ οὐκ ἀτρεκίη πρηγμάτων, οὐδ' ὑπισχυίομαι οὔτ' ἀληθὲς εἰδέναι. ἀσσα δὰν ἐπιλέγῃ Θεολογέων. τὰ ἄλλαχς ἠνοεῖν, ἅπαντα γαραίνισσομαι. τῇ δὲ νούσῳ πιεζόμενος ἐπίμαλλον, οὔτε τῶν τινα ἰητρῶν, οὔτε τοὺς ἑταίρους ἐσιέμην. προσεστεῶσι δὲ τῇ θυρῇ καὶ εἰρομένοις ὁκοῖόν τι εἴη, δεῖν δάκτυλον ἐκ τῆς κλειήθρης, ἔδειξ' ἂν ὡς ἔθυον τοῦ κακοῦ καὶ προεῖπ' αὐτοῖσιν ἥκειν εἰς τὴν ὑστεραίην ἐπὶ τὰς φερεκύδεω ταφάς.

Pherecydes Thaleti.

Bene moriaris, cum tibi fatalis dies supervenerit. Morbus me invaserat cum tuas accepi literas, pediculis operiebar, et febri quatiebar totus. Mandavi itaque quibusdam ex familiaribus, ut cum me sepelierint, ad te perferant quæ scripsi, tu autem si quidem ea probaveris cum sapientibus reliquis, ita legenda demum trades: sin autem improbaveritis, nolito edere. Mihi certe necdum satis placebant. Est ibi quidem non certa rerum fides. Neque enim id recepi, neque quid sit verum me scire professus sum: forte quædam de Theologia reseravi; cætera intelligere oportet. Omnia quippe indico potius, quam aperio. Morbo autem diebus singulis invalescente, neque medicorum quempiam, neque amicorum penitus admitto. Cæterum assistentibus præ foribus, et interrogantibus quo in statu sim, digito per ostii claustra dimisso, quam pestilenti malo tenear, ostendi: admonuique ut postridie conveniant ad solennes Pherecydis inferias. Diogenis Laertii, de Vitis, Dogmatibus, &c. clarorum Philosophorum Lib. X. Lib. I. Segm. 122.

I pretend to know the Truth, or to have found it out. I have rather opened a way to the Knowledge of Things, than diſcovered them.

Empedocles and *Pythagoras*, were no more certain of their Opinions than *Pherecides*, they often complained * that the Road of the Senſes, was too ſtrait to lead them to the Truth. *Xenophanes* †, who is placed in the number of the *Pythagoreans*, ackowledges he could comprehend nothing with Certainty. *Parminedes* ‡, that *Plato* honoured with the Sirname of the Great, looked upon them as proud and fooliſh, who pretended to be truly learned, Science being above the Reach of Man. *Zenoeleates*, a Diſciple of *Parminedes* ‖ ſaid, we ſhould ſuſpend our Belief. *Democritus* § affirmed, that the Cauſes of Things were unknown, that it was impoſſible to diſtinguiſh Truth from Falſhood. *Socrates*, the wiſe *Socrates* **, declared

* Accepit id Empedocles a Doctore Pythagora et tenuit, et anguſtas eſſe ad veritatem percipiendam ſenſuum ſemitas conqueſtus eſt. Pet. Dan. Huet. Epiſcopi Abricenſis, de Imbecillitate mentis humanæ, Lib. tres. Lib. I. Cap. XIV. p. 72.

† Acute quoque vidit eadem Xenophanes, qui inter Pythagoricos ponitur, firme comprehendi animo nihil poſſe, veritatis regulam eſſe nullam, non rationem, non ſenſus; ex opinione omnia pendere. Atque hæc tam aperte prædicavit, ut primus doctrinæ hujus, falſo licet, auctor creditus ſit. Id. p. 74.

‡ Parmenides ille, qui magnus cognomento perhibetur a Platone, temerarios appellabat, et arrogantes qui tribuerent ſibi ſcientiam, homo conſequi non poſſit. Id. ibid.

‖ Celebratur et inter eos qui continendam eſſe rati ſunt aſſenſionem, Zeno Eleates, Eleaticæ ſectæ parens. Id. p. 75.

§ Democriti auditor Protagoras, cognomine ſapientia dictus, nullum eſſe dixit veritatis regulam, nihil verum aut falſum, hominem homini plurimum intereſſe; neque quod huic videatur, idem alteri videri; neque rem ullam eſſe magis talem, quam talem; cumque de rebus ſingulis contraria et pugnantia diſſeri poſſe deprehendiſſet: ac de ipſa quoque re, an utrimque eſſet diſputabilis, illum in utramque partem diſputandi modum primus invexit. Id. p. 76.

** Modum eumdem tenuit deinde Socrates, nobiliſſimus dubitandi auctor, et late propagavit; nam cum nihil ſcirent homines,

declared publickly that he knew nothing, and by this Acknowledgment of his Ignorance, he deſerved the Title of being called the Wiſeſt of Men by the Oracle of *Apollo*. *Plato* * determined nothing when any Subject was propoſed to him, he never was poſitive; on the contrary, he confuted thoſe who decided boldly and magiſterially. His Modeſty cauſed his Adverſaries to treat him, as an ignorant and weak Man.

The great *Roman* Philoſophers were not leſs wavering than the *Grecian*.

Let me add, Madam, to this Teſtimony of *Pherecides* what *Socrates* ſaid of his Diſcoveries; they were bounded within a very narrow Compaſs; for he aſſures us, that he knew only one Thing, and that was, he knew Nothing. *Unum ſcio, quod nihil ſcio*. *Tully* was almoſt as wavering in his Belief as *Pherecides*. I ſhall ſpeak, ſaid this *Roman*, in a manner that aſcertains nothing poſitively, but with a Diſtruſt of myſelf. I doubt of every Thing, and only endeavour to diſcover the Truth. In another Place, he informs his Reader, that he ſhall explain Things only according to Probability, and not with the Certainty of an Oracle; and adds, that being but a Man, nothing more ought to be required of him. According to him,

homines, neque tamen agnoſcerent ſe nihil ſcire, id vero agnovit ille, nec quicquam ſcire profeſſus eſt: ac propterea mortalium omnium ſapientiſſimum Apollinis oraculo dictum ſe putabit: quod id ſupremum ſapientiæ culmen videatur eſſe ignorantiam ſuam agnoſcere. *Id. ibid.*

* Nam primum Academiæ parens Plato, ex hac Socratis aſſectatione ad dubitandum inſtructus et Socraticum ſe profeſſus, ſecutus eſt eamdam deſſerendi rationem, et ſuperiores omnes Philoſophos oppugnare inſtituit. Nec in iis ſolum libris, quos Gymnaſticos appellant, ſed tum etiam cum affirmanti propior eſt, ſive Socrati ſermonem tribuar, ſive alteri, res non uti veras, ſed uti veriſimiles videtur proferre; ac decreti hujus ſui meminiſſe, Diis deorumque filiis relinquendam eſſe cognitionem, ea perſequenda quæ probabilia ſunt. *Id.* p. 78.

almoſt all the Ancients confeſſed they knew nothing, and they were certain of nothing; and they reckoned amongſt the Cauſes of their Ignorance, their weak Perceptions, and the Shortneſs of their Lives *.

Philoſophers are not the only Perſons, who are convinced that we know but little. Great Saints and ſhining Courtiers, what Difference ſoever there may have been in their other Sentiments, are agreed in this Point. St. *Auguſtine* and St. *Thomas* believed that there is a vaſt number of doubtful Things, of which we can have no certain Aſſurance. *Horace*, bred up in the Pleaſures of *Auguſtus*'s Court, frankly confeſſes, that he was always doubtful and wavering, without being able to fix on any certain Baſis of Opinions, and that in this perpetual Fluctation, he endeavoured to make all things ſubſervient to him, rather than be a Slave to them †.

You may perhaps, Madam, have ſome Scruples after the Citation of ſo many Examples, in agreeing to diſtruſt the poſitive Writers among the Learned: therefore as I would not be a Heretick in your Opinion, I ſhall only mention, that one of

* Dicendum eſt ità ut nihil affirmem, quæram omnia dubitans, plerumque et mihi diffidente. Ut potero explicabo, nec tamen ut Pythias Apollo, certa ut ſint et fixa quæ dixero: ſed ut homunculus probabilia conjectura ſequens. ----- Equum eſt enim meminiſſe, et me qui differam hominem eſſe, et qui judicetis, ut ſi probabilia dicuntur nihil ultra requiratis.

Cicero Tuſc. Quæſt. Lib. I.

Omnes pene Veteres nihil cognoſci, nihil percipi, nihil ſcire poſſe dixerunt, anguſtos ſenſus, imbecilles animos, brevia curricula vitæ, &c. *Cicero Quæſt. Academ. Lib.* I.

† *Ac ne forte roges, quo me duce, quo lare tuter?*
Nullius addictus jurare in verba Magiſtri,
Quo me cumque rapit tempeſtas deferor hoſpes.
Nunc agilis fio, et merſor civilibus undis:
Virtutes veræ cuſtos, rigiduſque ſatelles.
Nunc in Ariſtippi furtim præcepta relabor:
Et mihi res, non me rebus, ſubjungere conor.

Horat. Epiſt. I. Lib. I.

of the greateſt Biſhops in *France*, has furniſhed me with almoſt all theſe Examples. I have ſcarcely done any thing, but tranſlate the *Latin* Work of the learned Mr. *Huet*, Biſhop of *Avarenche*, which he has given us upon the Weakneſs of human Underſtanding. This Prelate, who is doubtleſs the moſt learned Man of this Age, has ſtudied all his Life long, wrote a Book of the Neceſſity of doubting; the half learned have cried out greatly againſt this Work, but they have only diſcovered their own Weakneſs.

You ſee, Madam, I was in the right when I aſſured you, that the greateſt Geniuſes have honeſtly owned they knew but little; and you will no longer think my Opinion extravagant. Nevertheleſs, I would not have you carry the Spirit of *Pyrrhoniſm* into the way, where I am going to lead you; for that is an Error ſtill more pernicious than Credulity. I only deſire, that being in love with Truth (for we know but little, and what we take to be our moſt ſure Guides, *viz.* Hiſtory, Tradition, and the Opinions of the Learned, often miſlead us) you would always make uſe of your Reaſon, and receive nothing for an evident Truth, only ſo far as it does not contradict your natural Light, which can never deceive you, in thoſe Things, that you have a clear and diſtinct Perception of.

The End of the Firſt Diſſertation.

Philoſophical Diſſertations,

Concerning the UNCERTAINTY of

HUMAN SCIENCES.

DISSERTATION II.

Concerning LOGIC.

SECT. I. *The* INTRODUCTION.

THE firſt Part of Philoſophy, or at leaſt that which in public Schools ſerves for an Introduction to the other Parts, is called *Logic*, which is as much as to ſay, *The Art of Thinking* *. By enlarging this Definition a little, we may

* Thought is nothing but a Diſcourſe by which the Underſtanding ſpeaks or argues inwardly in itſelf; Experience ſhewing us, that whenever we think we tacitly make uſe of the ſame Words, which we ſhould make uſe of, if we were to expreſs our Thoughts *vivâ voce*.

Bernier's Abridgm. of *Gaſſendus*'s Phil. Tom. I. p. 1.

This Remark ſerves for an Anſwer to thoſe, who may object, that *Logic* ought to be defined, *The Art of Reaſoning well*. See the Second Diſcourſe by Way of Preface to *L'Art de Penſer*. p. 34.

may ſay that *Logic* is, *The Art of conducting our Reaſon rightly in the Knowledge of Things, as well to inſtruct ourſelves, as for the Inſtruction of others* *. The Beauty of this Definition, and this firſt ſetting out, which promiſes ſo much, will prejudice you perhaps in Favour of *Logic*. You will imagine, Madam, that I am going to diſcover to you the moſt grand and beautiful Scene in Nature. Nothing is more agreeable indeed, than to acquire the Art of inſtructing ourſelves, and of communicating our Knowledge to others. But before I go any further, to ſhew you the true Value of *Logic*, it may not be amiſs to tell you what Sentiments the greateſt Philoſophers have of it.

This Science, or this Art, was formerly much in uſe amongſt the *Sophiſts*, a ſort of People who only employed it to darken the Truth. But in ſpite of all their Subtlety, they were ſoon reduced by the Force of clear Propoſitions, and by obliging them by Diſtinctions taken from the Nature of Things, to abandon their falſe Niceties. It was thus that *Socrates* uſually dealt with them in his Diſputations.

Ariſtotle † was the firſt that reduced *Logic* to certain Rules and Precepts. He compoſed a methodical Syſtem thereof, and taught all how to diſtinguiſh what were Sophiſms, with which the Truth had been clouded. But this Philoſopher committed a material Fault; for inſtead of reducing *Logic* within a narrow Compaſs, and giving it

* This is the Definition we have of it in *L'Art de Penſer.*

† *Ariſtotle* was the firſt that reduced *Logic* to certain methodical Precepts; for before him the Sophiſts were far from any ſuch thing; they made uſe of it to enſnare weak Reaſoners, and by that means acquired the Reputation of being very cunning Fellows.

Du Pleix Corps de Philoſophie, Tom. I. p. 5.

it only the Extent it deſerved, he rendered himſelf obſcure by being too copious; and after having ſaid a great many Things, he furniſhes the Mind of the Learner with nothing but a Heap of Terms, Diviſions, and Subdiviſions *. His Diſciples and Commentators compleated the logical Confuſion, and made it unintelligible; every one adding ſomething thereto that was either whimſical or uſeleſs †. At laſt St. *Thomas* invented *the Being of Reaſon*. *Scotus* publiſhed his ridiculous Quiddities which procured him the Title of *Doctor Subtilis*; and from thence Philoſophers employed themſelves only in Propoſitions and frivolous Theſes, that naturally led the Underſtanding into the greateſt Errors. In this Time of mental Blindneſs, *Gaſſendus* appeared all on a ſudden, like a bright Star in the middle of a dark Night. Aſſiſted by the reading of ſome of the ancient Philoſophers, and ſupported by his own vaſt Genius, he made the firſt Attack upon Error. He printed his Book againſt *Ariſtotle*'s Philoſophy, which was received with great Applauſe by all the learned Men in *Europe*, who for a long time had groaned under the Yoke of the reigning Philoſophy ‡. *Gaſſendus* was followed by *Des Cartes*,

* A modern Author tell us with great Reaſon, that the Rules of *Ariſtotle*'s *Logic* ſerved only to prove to another what he knew already. But that the Art of *Lullus* taught only how to Diſcourſe with Judgment upon what Men knew nothing of. *Art de Penſer*. p. 22.

† The Works of *Ariſtotle* have had the Fate of all Writings which have been commented upon, and reviewed by different Authors. Every one adds ſomething thereto of his own; and in Proceſs of Time, if an Author ſhould return from the Dead, he would be amazed to ſee what Notions are imputed to him.

‡ He began to be wholly out of Conceit with the common Philoſophy, becauſe of the Chicanery and uſeleſs Queſtions it abounded with. On which he put out *Theſes pro & contra*, and printed his learned Diſſertations ADVERSUS ARISTOTELEOS, which made ſo much Noiſe in the World.

Bernier's Abridgment of Gaſſendus's Philo. Tom. I. Preface.

who entirely demoliſhed the Chimeras of the School-Men. Human Underſtanding from thence began to recover her Rights. Reaſon, Good Senſe, and the Light of Nature were the Rules that roſe into Vogue again; and *Logic* became one of the moſt contemptible Branches of School-Learning. *Des Cartes* demonſtrated clearly, in many Places of his Writings, that it only furniſhed little Minds with common Notions, and taught them to reaſon ridiculouſly upon Things they were ignorant of *. He adviſed however the learning of certain reaſonable Principles of a well-concerted *Logic*; but *Gaſſendus* abſolutely deſpiſed that Study. He thought, that *where the Eye ſees, the Ear hears, and the reſt of the Senſes perform their Functions, the Underſtanding without having recourſe to Rules, was capable of reaſoning, ſeeking for and finding out the Truth, and drawing Concluſions therefrom without the Aſſiſtance of* Logic.——*He did not reckon it in the Number of the neceſſary Parts of Philoſophy; he did not even think, that Students ſhould begin with it, for fear of being diſcouraged by ſo unprofitable a Study.*

You ſee, Madam, here are very ſtrong Authorities againſt *Logic*. Yet we may and ought to ſay in its favour, that all the great Philoſophers have ſhewn their Contempt only for what is called the *Logic* of the Schools, as it is uſually taught in Colleges, and the Monks make uſe of it. It ſeems indeed contrived purely for their uſe, and this Study is very fit for People who amuſe

* The *Logic* of the Schools is properly ſpeaking a Dialect, by which a Man teaches another the Things he knew before; or even alſo to ſay a great deal without Judgment, concerning Things they know nothing of; thus it rather corrupts good Senſe, than augments it.

Des Cartes's Principles of Philoſophy, in the Preface.

amuſe themſelves only with Chimeras. *Gens Monaca, Gens paſta Chimæris.* I believe we cannot err in following the Rule laid down by *Des Cartes, of ſtudying certain reaſonable Principles of a well-concerted* Logic. Whatever Penetration of Mind, or Exactneſs of Underſtanding a Man may be endowed with, a proper Method of directing our Thoughts will render our Judgments more perfect. By reducing *Logic* to certain fit Bounds, it may be made uſeful. We have indeed of late a very good Treatiſe publiſhed upon this Subject, which has a little retrieved its loſt Reputation; though to ſpeak openly and freely that Piece * is rather a Collection of the moſt entertaining Phyſical and Metaphyſical Queſtions, which are interlaced with ſome ſound Precepts in *Logic* †, void of its impertinent Jargon.

SECT. II. *In what* Logic *conſiſts.*

LOGIC conſiſts in the Reflexions which we make upon the principal Operations of our Mind, and is what we call the Art of Thinking. It contains four diſtinguiſhing Heads, *viz.*

* I have alſo remarked that this *Logic* ---- if you except therefrom ſome improper Examples, and ſome long and beautiful Chapters of Natural Philoſophy, Morality, Metaphyſics, and the Mathematics, is very much like that of *Gaſſendus.*

Bernier ubi ſupra.

† The Queſtions, which I thought proper to omit, are of this kind. They have this Conveniency, that they have little Credit, not only in the World where they are unknown, but alſo in the Schools where they taught. For nobody now, Heaven be praiſed, troubles his head with *Univerſality à parte Rei; the Being of Reaſon, or ſecond Intentions.* Thus there is no room to ſuppoſe, that any one will be offended, that they are not ſpoken of. Beſides, theſe Matters are ſo unfit to be tranſlated into the vulgar Tongues, that they would rather decry Philoſophy than give it any Repute.

Art de Penſer. premier Diſcours prelim. p. 30.

Conception, Judgment, Reaſoning, and Diſpoſition or Order.

Conception, or Imagination is the forming the true Image of a Thing in the Mind, by means of which Image the thing itſelf is preſented to the Underſtanding. As when we repreſent to ourſelves the Sun, a Tree, a Circle, *&c.* yet without paſſing any expreſs Judgment upon thoſe Things. Now, this Form, by which we repreſent a Thing to ourſelves, this firſt and ſimple Conception, is called Idea or Notion.

Judgment is the ſpeaking of a Thing what it is, or what it is not; attributing to it what belongs to it, and ſtripping it of what does not belong to it. This Operation of our Mind is made, when joining two different Ideas together, we affirm or deny them; as when we ſay, the Earth is round, and not ſquare, we affirm its Roundneſs, and deny that it has any other Figure. Or when we affirm that a Man is a living Creature, and not a Tree; we attribute to Man what belongs to him, and deny that he is a Tree.

The third Operation of our Mind is called Reaſoning; that is to ſay, inferring from one or more Propoſitions ſomething as a conſequential Concluſion. As when we ſay, Unfaithfulneſs is a Crime; there are many unfaithful Lovers; many Lovers therefore are criminal. You ſee, Madam, that from the Aſſemblage of theſe two firſt Propoſitions,

1. Unfaithfulneſs is a Crime;
2. There are many unfaithful Lovers;

I draw the Concluſion, that many Lovers are criminal.

But to explain the three principal Operations of our Mind more clearly to you, I beg you would

would give me leave to repreſent to you how a Man acts, who becomes your Lover. At firſt he is ſtruck with your Features, and thereupon forms in his Mind a true and ſimple Image, without going any further. This is what is called Conception; after this he conſiders that your Features are beautiful and charming, and oppoſite to what is called Uglineſs; he affirms then what has a relation to a thing, and what has not; he joins theſe two different Ideas together, that of the Beauty of your Features and that of Uglineſs, which is contrary thereto; this is called Judgment. From hence the Mind is naturally led to the third Operation, which is termed Reaſoning, and connecting the different Ideas, which your Beauty has already raiſed in him, he thence draws this Concluſion,

Beauty deſerves our utmoſt Eſteem,
Madam is endowed with exquiſite Beauty,
Therefore ſhe deſerves our utmoſt Eſteem.

The laſt of the Operations of our Mind is called Diſpoſition or Order; that is to ſay, a diſpoſing and ranging our Thoughts upon any Subject, in the moſt eaſy and clear manner that we can; and this is what we uſually call Method.

This laſt Part of *Logic* has alſo a great Relation to the Lover I have been ſpeaking of. You ſee, Madam, that when good Senſe has demonſtrated, that you are worthy of our higheſt Eſteem, it takes Precautions how to make it acceptable to you, and to expreſs it in ſuch a manner as that it may be favourably received. Now, Madam, that which a Lover calls the Declaration or Expreſſing of his Paſſion, Philoſophers call various Ideas, various Judgments, and various Reaſon-

ings. And it is this Arrangement of Things appurtaining to the fourth Part of *Logic*, that is called Method.

In fine, Madam, as it very often happens, that a Lover gains the Affections of his Miſtreſs without being attentive to all theſe Graduations and Diſtinctions in Gallantry; we alſo ſee that many Perſons, without having learned any logical Rules, perform theſe Operations with the greateſt Exactneſs, and ſometimes better and more accurately than profeſſed Philoſophers *; Nature having beſtowed Reaſon upon Men, furniſhes them abundantly with the Means of Reaſoning. Nevertheleſs, Study may rectify our Judgment. And it ſometimes happens, that though we diſcover by the Light of Nature, that ſuch or ſuch an Argument is falſe, yet we can hardly make out why it is ſo. In theſe Caſes, Rules of Art are of very great Service.

SECT. III. *All our Ideas have their Riſe from our Senſes, or from thoſe that come by our Senſes.*

YOU are to ſuppoſe, Madam, that at the firſt the Soul is a *Tabula Raſa*, like a blank Piece of white Paper, void of all Characters, on which nothing is written. Thus it has no Ideas at all. You will aſk doubtleſs with Aſtoniſhment, by what means our Souls acquire ſo many of them, that the Imagination, always in motion, furniſhes it with ſo great a Variety? I will tell you, how it obtains them; firſt, from outward and ſenſible Objects that ſtrike our Senſes; ſecondly, from the Operations of our Mind, upon the

* All this is done by the meer Powers of Nature, and even ſometimes better by thoſe, who never learned the Art of *Logic*, than by thoſe that have. *Art de Penſer.* p. 2.

the Ideas which it receives by our Senſes. Theſe are Operations, which become the Object of the Reflexions of our Souls, forming and producing in our Underſtanding, a ſort of Ideas different from thoſe which exterior Objects furniſh them withal. Such Ideas, for Example, as are derived from Thinking, Judging, Examining, Deſiring, Wiſhing, and other Actions of the Mind; whoſe Exiſtence we are thoroughly perſuaded of, becauſe we feel and are ſenſible of them in ourſelves.

The Ideas which we receive this way, are as diſtinct as thoſe which exterior Objects produce upon our Senſes. Thus, Madam, all our Ideas proceed from Senſation and Reflection; by Senſation outward Objects furniſh the Mind with the Ideas of ſenſible Qualities, ſuch as we receive by the Taſte, the Touch, by Hearing, Smelling or Seeing. The Senſes communicate to us the Notions or Ideas of different Smells, Colours, Sounds, as well as thoſe of Light and Darkneſs, *&c.* By Reflexion the Mind furniſhes the Underſtanding with the Ideas of its own Operations; that is to ſay, from the Ideas, which we receive by our Senſes, and which are imprinted in our Underſtanding many others are formed, by mixing them in various Manners. As when from the Idea of a Mountain, and that of Gold, we make a third, which gives us a Notion of a Mountain of Gold.

We have therefore, Madam, no Ideas in our Minds but what proceed from Senſation or Reflection. Thus alſo by Senſation we have more or fewer ſimple Ideas, according as outward Objects, which ſtrike our Senſes, furniſh the Mind with them. He that is deaf for Example, has fewer Ideas than a Man who has the complete uſe of all his Senſes, ſince he can have no Notion of Sounds: And he, that is both blind and deaf

deaf has ſtill fewer, as he can have no Notion either of Colours or Sounds. In the ſame manner, the Operations of our Minds, or our Reflections, furniſh us with a greater or leſſer Number of Ideas, according as we reflect more or leſs upon the firſt Ideas which our Senſes have conveyed to our Underſtanding. For this reaſon, we ſee that Children are a good while before they have any Ideas or Notions of Things that are formed by Reflection, or if you will by mental Operations. It is alſo for the ſame reaſon, that ſome People know things only in part; and from a great Number of Ideas produced by Senſation, gain only a ſuperficial and imperfect Knowledge of Things.

You ſee plainly by this, Madam, that Man having no Idea but what he receives either directly or indirectly from his Senſes, he cannot begin to think, till he begins to have Perceptions of Objects. For ſeeing he can have no Idea before his Senſes operate, he can therefore have no Faculty of Thinking. I am ſenſible, that you will be very much ſurprized at my having ſo roundly aſſerted, that we know ſo few Things. *What*, you will ſay, *do you call this knowing of nothing, to diſcover with ſo much exactneſs the firſt Operations of the human Mind?* You will not accuſe me of Inſincerity in this Affair, when I have ſhewn you, that the Principles which I have laid down, how juſt ſoever they may appear, have been controverted, and rejected as falſe by very great Philoſophers, who have refuted them in ſuch a manner, as to make thoſe doubt of them, whom they could not intirely bring over to their Sentiments. A terrible Mortification of human Vanity, to be obliged to own, that we are even

ignorant

ignorant of the Means, whereby we acquire the Faculty of Thinking!

The Philoſophers, who maintain, that we have Ideas, which we do not receive by the Means of our Senſes, pretend that there is a certain Number of them, which are born with us. I leave this Queſtion to examine it more at large hereafter; but I will give you here their principal Reaſons for that Opinion. *There is no Propoſition*, ſays a *Carteſian* *, *more evident than this*, I think, therefore I am. *Now we could have no certain Aſſurance of this Propoſition, if we had no clear Perception of what* Being *is, and what* Thinking *is. If it cannot be denied therefore, that the Ideas of* Being *and* Thinking *are in our Underſtanding, by what Senſes, by what exterior Objects were they produced there? They are neither the Ideas of Light nor Colours to be received by the Sight; of grave or acute Sounds to be received by the Ear; of Perfumes or a Stink to be received by the Smell; of a good or ill Reliſh to be received by the Taſte; of Cold or Heat, of Hardneſs or Softneſs to be received by the Touch.*

The Philoſopher, who reaſons thus, obviates an Objection which he foreſaw might be made to his Arguments. *If any ſhould ſay*, adds he, *that the Ideas of Being and Thought were formed from other ſenſible Images, let them tell us what thoſe other ſenſible Images are, from whence they pretend they were formed, and how they could be formed.* It is evident indeed, this could not be done by *Compoſition*; for as the Ideas of *Being* and *Thought* are ſimple and ſelf-evident, they cannot be the Conſequence of a *Reflection produced by the Aſſemblage of two different Ideas.* Neither can they be formed by *Amplication* or *Diminution*; for we cannot ſay, that the Ideas of *Being* or *Thought* can

* *Art de Penſer.* p. 12.

can be formed by a Gradation or Diminution of other Ideas. Our Soul therefore muſt have ſeveral Ideas in itſelf, which are not derived from our Senſes, but have their Source in our Underſtanding.

I ſee, Madam, you are chagrined at the *Carteſian*, who oppoſes the moſt reaſonable and natural Syſtem that can be thought of. You began to reliſh the Means of *Senſation and Reflection*, as proper to introduce all Ideas into the human Mind. You imagined you perceived the Underſtanding and Soul of a young Child grow, in proportion as his Organs waxed ſtrong, and received a greater Number of exterior Objects. This Syſtem has ſomething amuſing in it. Man ſeems to be a Plant, and we ſee his Soul and Body encreaſe at the ſame time. The Notions, that the Underſtanding acquires every Day by the Canal of the Senſes, are to the Mind, as the Droppings of Dew, which bring it at laſt to its mature State, by procuring it an infinite Variety of Ideas. Nevertheleſs, if the *Carteſian* be in the right, we muſt allow exterior Objects only the Power of occaſioning, by the Motions that are excited in the Brain, ſome Ideas, which could not be formed without that Power; but that the generality of our Notions cannot be referred to our Senſes, and the Soul alone will have the Power of forming them by *meer Intellection*, without being obliged for them to any but God and herſelf.

You will probably aſk me, Madam, my Sentiments concerning theſe different Opinions, and to which I give *Credence?* If by the Word *Credence* you mean Certainty, and a convinced Perſuaſion, I confeſs I give none; and to be free with you, after having examined the Thing, I

am

am ſincere enough to tell you, that I ſee an Appearance of Truth in both the Opinions. If you urge me further, and will have me determine ſomething abſolutely, I will moreover confeſs to you, that I could willingly be of the Opinion, that we have no Ideas in our Minds but what are communicated to us by our Senſes; and that all our Notions or Ideas have their Origin either from *Senſation*, or from a *Reflection* upon thoſe, which we receive by Senſation. See here what my Reaſons are, I cannot tell whether you will find the Appearance of Truth in them or not.

When a *Carteſian* demands, by what Senſes the Ideas of *Being* and *Thought* enter into our Minds? We may anſwer, that they enter therein the very Moment that we receive our firſt *Senſation*; for we know we exiſt as ſoon as we are ſenſible of any Thought. And I believe we may as well prove our Exiſtence by ſaying, *I am ſenſible, therefore I am*; as by ſaying, *I think, therefore I am.* If we know then that we exiſt, by the Impreſſion of our Senſes, I think that the firſt Idea of *Being* is produced in us the very Moment, that we have the firſt *Senſation*, which gives us a Perception of our Exiſtence in our Minds. I will add, that if we do not acquire our Ideas by the means of our Senſes, and that the Soul itſelf creates them, it will follow that ſome of them muſt be innate with it; which I can ſcarcely believe, and which is attended with many Difficulties, as I ſhall ſhew you hereafter. For all thoſe, who hold that we have innate Ideas, look upon that of God *, as one of the principal.

* Since then the Idea of the Supreme Being, is not an innate Idea, as I have evidently demonſtrated, at leaſt I think ſo, I believe it will be difficult to find any other Idea, which has a right to paſs for innate. For if God had imprinted any Character

cipal. I aſk them then, why ſo many Nations have had ſuch falſe and ridiculous Notions of the Deity, that inſtead of acknowledging a Being perfect, juſt, great in his Works, and infinite in all his Attributes, they have adored a Number of Gods, worthy of the Deteſtation of all honeſt and conſiderate Men? They will anſwer perhaps, *that God imprints in the Hearts of all Men the Idea of his Divinity; but that Men alter and pervert this Idea by a falſe Application to particular Objects.* But nothing can be more weak than this Defence; for to what Purpoſe are theſe abſtracted Ideas of the Deity, which produce no good, and are wholly uſeleſs? Beſides abſtracted Ideas ſuppoſe, that we are already acquainted with the Objects they repreſent; and Abſtraction can have no relation to a firſt Idea, or if you will, to an innate Idea. Let us add to theſe Reaſons, that as God does nothing in vain, it is very hard to ſuppoſe, not to ſay impoſſible, that he can communicate to us an Idea of himſelf, under a Notion of a Being, which not only does not exiſt, but which is even directly oppoſite to his Juſtice, his Goodneſs, his Greatneſs, as much as the Ideas are which Men have of the falſe Deities of Paganiſm. Nay ſome Travellers aſſure us, that there are People, who have no Idea of a God at all *.

It

Character in the Minds of Men, it is moſt reaſonable to think, it would be ſome clear and uniform Idea of himſelf, that would be deeply engraven in our Mind. ----Since then our Mind at firſt is void of that Idea it concerns us moſt to have, it is a ſtrong Preſumption againſt all other Characters, which ſome are deſirous ſhould paſs for innate.

Locke's Eſſay on Human Underſtanding. Book I. Chap. II.

* *Reperi eam gentem nullum nomen habere, quod Deum & hominis Animam ſignificet; nulla ſacra habet, nulla Idola.*

Relatio Triplex de Rebus Indicis Caaiguarum.

Add to this Paſſage, this other from F. *Gobien* the *Jeſuit*, ſpeaking of the Inhabitants of the *Marian* Iſlands, and others

upon

It ſeems reaſonable to me, that all Metaphyſical Arguments, ſhould give place to Experience. Whom ought I to believe, a Philoſopher who only founds his Reaſoning upon abſtract Ideas, or a Traveller worthy of Credit, who founds his upon Experience, and on the Reality of Things, to which he has been a Witneſs? I have a great reſpect to Metaphyſicks; but not ſo far, as to ſacrifice Evidence thereto.

SECT. IV. *Of Ideas conſidered according to their Objects.*

AFTER having examined the manner by which we receive different Ideas into our Underſtanding, I am going to let you view them according to their Objects.

Whatever we conceive is repreſented to us as a *Thing*, or as *the manner of a Thing*, or as a *Thing modified*. That which I call a *Thing*, is that which we conceive and perceive as a ſelf-exiſtent Subſtance, and as the Subject of whatever we know thereof; for Example, when I conceive a Body, the Idea which I have of it preſents to me a Thing or a Subſtance; becauſe I conſider this Body as a Thing that ſubſiſts of itſelf; but when I conceive that this Body is ſquare, the Idea which I have of the Square offers only to my Mind *the Manner of the Thing*, *the Quality*, *Attribute or Mode* *, which I know could not exiſt

upon the ſame Coaſt. *It has never been obſerved, that they have any Knowledge of a Deity, or that they Worſhip any Images.* Hiſt. des Iles Marianes. p. 406.

* All theſe Words are of the ſame Import, and ſignify the ſame Thing. The Categories of *Ariſtotle*, which have been held ſo myſterious, are of very little uſe; and they not only have little Tendency to form the Judgment, but often hurt it greatly. *Arte de Penſer.* p. 21.

exiſt without the Body of which it is the ſquaring; and conſequently the Difference between a *Thing* and the *manner of a Thing*, or between a *Subſtance* and its *Mode*, is very eaſy to be diſtinguiſhed. Subſtance is the Subject, and Mode is the Attribute, which exhibits it in ſuch a manner, that when I conſider, at one and the ſame time, the Subject and the Mode, I perceive it is a *Thing modified*. As I do, when I conceive the Idea of a ſquare Body without diſtinguiſhing the Subſtance of the Mode, *viz.* the Body of the Quadrature.

Here you ſee, Madam, the three ſorts of Ways whereby we conceive all Things. The firſt repreſents to us the *Subſtances*, or *Things that are ſelf-ſubſiſting*. The ſecond the *Qualities* or *Attributes* which exhibit theſe Things. And the third repreſents theſe *Subſtances* as things determined and modified by their *Attributes*.

If it were my Deſign, Madam, to ſet you againſt Philoſophy for ever, and particularly againſt *Ariſtotle*, Father *Bonaventure*'s great Friend, I would give you a long Detail of that Philoſopher's ten Categories, which may be eaſily applied to the Conſideration of Ideas according to their Objects, which I have been ſpeaking of. But I have too great a Value for ſo amiable a Scholar, to fatigue you with a meer Heap of uſeleſs Words, that are more fit to embroil than ſettle your Judgment *.

Theſe Categories are regarded in the Schools with as much Reſpect as the *Jews* paid to the Tables of the Law delivered to them by *Moſes*; and

* The ſecond Reaſon, which renders the Studies of Categories dangerous, is, as it accuſtomes Men to be contented with Words, and to imagine that they know all Things, when, they know nothing more, than Names given at Pleaſure, which convey to the Mind no clear and diſtinct Idea.

Arte de Penſer. p. 23.

and we may ſay, that the *Hebrew* Legiſlator had not a quarter of the Authority over the Tribes of *Iſrael*, that this *Greek* Philoſopher has over the Scholaſtic Tribes. Thoſe celebrated Categories are ten Claſſes, to which *Ariſtotle* had a mind to reduce all the Objects of our Thoughts. But the firſt Method, of which I have given you a Specimen, will be ſufficient to clear up all the Difficulties, which may ariſe in the Sequel of theſe Diſſertations.

SECT. V. *The Ideas, which we get by our own Experience, are more perfect than thoſe which we gain otherwiſe.*

WE acquire our Ideas either by our own Experience, or by Notices which we receive from others. When Things are preſent before us, then we make uſe of our Senſes to try and know what they are. As by the Sight we diſtinguiſh Colours, and by Hearing the difference of Sounds. But when Things are abſent, and at a Diſtance from us, we learn from others what they are, either by Diſcourſe which we have with them, or by the reading of Books. Nevertheleſs, the Ideas, which we receive by our Senſes, are much more perfect than thoſe which we gain from the Recital of others. For the Idea, which we receive by a Thing, that falls under our Senſes, is the Idea of the Thing itſelf; whereas that which we receive from the Deſcription of another, is rather the Idea of that Deſcription than of the Thing itſelf. Thus we ſee, that after having heard or read ſomething, we gain thereby indeed an Idea thereof; but if it happens, that this Thing preſents itſelf to us in

in reality, the Idea which we receive thereby is much more exact, and will be different from the former. *Our Mind is more intent upon the real Repreſentation of a Thing* *, *than upon the bare Relation of it made to us by another.* The Idea, which comes directly to us by our Senſes, is an Original, and the other is but a Copy, which is often irregular and faulty, according to the Perſon or Book from which we receive it. It is prudent, before we ground any Belief upon ſuch Ideas, to examine whether or no they do not contradict the clear Notions, which we receive by our Senſes.

SECT. VI. *We muſt take care not to ſuffer ourſelves to be deceived by our Senſes, or by our Paſſions, or by the Authority of thoſe, who relate any thing to us.*

WE ought to be careful with regard to thoſe Things, which we gain the Knowledge of by our Senſes. For, though the Experience, which is gained thereby, be the ſovereign and deciſive Rule, to which we ought to have recourſe, when we are in any doubt; yet, before we give any certain Belief to the Ideas, which they communicate to us, we ought to be convinced by due Examination, that they are evident, and cannot reaſonably be contradicted. Without this Precaution, we ſhall run the Riſque of being often deceived. We may take Copper that is gilt for Gold. And we ſhould be apt to affirm, that a ſquare Tower, which we ſee at a great Diſtance,

* *Segniùs irritant animos demiſſa per aures*
Quam quæ ſunt oculis commiſſa fidelibus.
Hor. de Art. Poet. V. 180.

Diſtance, is round. But when we apply Copper to the Touch-ſtone, we rectify the firſt Notions of our Senſes by the ſecond; and by approaching near to the Tower, we do the ſame, and diſcover that it is ſquare.

When we happen to be miſtaken, we ought not immediately to charge that Miſtake upon our Senſes, which never deceive us, when we permit them to act freely and fully *. But we ought to blame ourſelves for judging too precipitately of a thing, which we are not throughly acquainted with; and concerning which our Senſes have not Strength enough to examine it fully †. Such is the falſe Idea which we conceive of a ſquare Tower, which we imagine to be round, when we view it a long way off; the Diſtance weakening our Sight, and permitting our Senſes only the means of acting feebly, and as I may ſay by Halves.

We ought alſo, if we would rectify our Ideas, as much as lies in our Power, to diſtruſt ourſelves, that is to ſay, our Conſtitution and Paſſions, without which, we ſhall run the Riſque of making many falſe Deciſions, and form Ideas according to our Inclinations. A Man, who drinks no Wine, and never taſted any in his Life, has an Idea of Wine as diſagreeable to the Taſte; we ſee a Multitude of Perſons every day, who have an Antipathy for Things, that are indifferent

* *Qui niſi ſunt veri, ratio quoq; falſa ſit omnis.*
Lucret. Lib. IV. Ver. 487.

† When we perceive any thing, we are in no Danger of being miſtaken, if we paſs no Judgment thereon; and though we do paſs our Judgment upon it, provided we do not give our Aſſent thereto, farther than we know we underſtand clearly and diſtinctly, what we paſs Judgment upon, we cannot be deceived. But that which uſually leads us into Error is, that we paſs our Judgment before we have an exact Knowledge of what we paſs our Judgment upon.
Des Cartes Princ. de Philoſ. p. 26.

rent or even good in themſelves. Theſe are falſe Ideas, and the Judgment that our Underſtanding paſſes, with regard thereto, is defective.

Our Paſſions are alſo the Source of a great many Ideas, which we ought to examine with the utmoſt Attention; becauſe having Reaſon to diſtruſt the Judgment which we make thereby, we ought to be afraid of becoming Dupes to ourſelves. Lovers change all the Defects of their Miſtreſſes into Beauties and Perfections. Thoſe, who are governed by Hatred, condemn the good Qualities and Virtues of their Enemies, as Vices. When we judge of Things through the Vail of our Paſſions, we are in danger of being deceived and miſled; we ſtifle the Truth of our Ideas through Prejudice. If we would have ſound and exact Notions of Things, the Faculties of our Underſtanding muſt be at full Liberty to examine and chuſe what are the moſt true.

This would be a proper Place to ſhew you, how much we ought to diſtruſt the Authority of thoſe, who give us a Recital of certain Facts; and how carefully we ought to weigh and examine Things, before we receive them as true upon the bare Atteſtation of many illiterate Perſons, who are eaſily deceived*. But having ſhewn you, at the Beginning of theſe Diſſertations, the Neceſſity of diſtruſting the Authority of

* Truth and Falſhood have a great Reſemblance in their Looks; and amongſt thoſe, who have been firſt informed of ſome ſtrange Novelty, we ſee many of them, who, perceiving by the Oppoſition they meet with, when they tell their Story, wherein the Difficulty of Perſuaſion lies, go and patch up that Place with ſome falſe Circumſtance, augmenting the Building from time to time in ſuch a manner, that the moſt diſtant Witneſs is better acquainted with it than the neareſt; and he that is informed the laſt is better perſuaded than the firſt; the particular Error having firſt cauſed a publick Error; and afterwards in its Turn, the publick Error cauſing a particular Error. *Montagne*'s Eſſays. Tom. I. Lib. III.

of the Learned, I think it the leſs needful to demonſtrate to you, how dangerous it is to give eaſy Credit to ſuch as, far from being able to inſtruct others, are in miſerable Ignorance themſelves. Suffer me however to perſuade you to diſtruſt the *Janſeniſts* and *Moliniſts* in a particular manner. I know none but meer Mountebanks, that are more capable than they of filling the Mind with Chimeras and Impoſtures. All thoſe who are bred up within the Pale of a private Spirit, are for ever ſhut up from the Truth. Their Ideas are only a Heap of Whims and Viſions of a Party. The Fanaticiſm of the *French* Prophets, and the ridiculous Bigotry of the Seminariſts of St. *Sulpice*, are evident Proofs of the Truth of what I ſay. Conſider, Madam, what you ought to think of a great many People, who imagine they honour the Saints, and ſerve God by wearing Shoe-ſtrings inſtead of Buckles, and cruelly perſecuting all thoſe who are not exactly of their Sentiments *. Methinks it is very merry, that the *Moliniſts* ſhould now beat the *Janſeniſts* with their own Weapons. Theſe latter looked upon the former heretofore as Bigots, reproached them with their great Hats, and Shirts without Ruffles. But now they themſelves have adopted all ſorts of Mummery, and endeavour to bubble People with the ſame Things, that they formerly objected to their Antagoniſts. Nay, I do not doubt, but that if ever the *Janſeniſts* ſhould ceaſe to be Fanatics, we ſhould ſee the *Moliniſts* cut Capers upon the Tomb of ſome Saint of their Party, and make a ſecond Volume to the Abbot *Becheran*'s Collection †. Heaven preſerve every honeſt Man from a Party-Spirit, and the Converſation

* The *Sulpicians* ſpoken of above.

† See the *Jewiſh* Letters, Lett. VII. p. 50.

of ſuch as are tainted with it. I had rather live with a languiſhing Lover; not but that this laſt is a ſort of Fanatic in his way, but yet his Phrenzy is leſs burdenſome, and not ſo furious. However, Madam, the Ideas, which we have of a Lover are uſually ſubject to Caution, eſpecially when they relate to the Object he is in love withal. A Man, whoſe Heart is deeply wounded, deifies his Miſtreſs. Though ſhe be as ſtupid as a *Mathurin*, he takes her to be as witty as the *Counteſs de la Suze*. Though ſhe be as ſimple as a *Franciſcan*, he looks upon her as the Mirror of Wiſdom. Though ſhe be as greaſy as a *Capuchin*, he thinks her as neat as a *Nereid*; and, in ſhort, though ſhe be as ugly as *Megæra* and *Tiſiphone*, ſhe appears in his Eyes a *Venus*, and as beautiful as you are.

SECT. VII. *Of the Neceſſity of defining the Terms we make uſe of, and of avoiding ambiguous Words, and intricate Phraſes.*

WHEN the Name, that is given to a Thing, is ambiguous, and has many Significations, it often happens that in hearing it pronounced, we form an Idea different from that which he has who pronounces it; and this Diverſity of Conception hinders us from comprehending properly the Fact or Queſtion in Debate. Ambiguity in Words alſo occaſions a great Number of needleſs Diſputes *. So that we ought to give

* Not to ſay, that the greateſt Part of the Sophiſms, by which Men are deceived have their Riſe thereſrom, ſeeing there is always ſome Word taken in diverſe Senſes. It is eaſy to be obſerved, that moſt of your Scholaſtic Diſputes proceed only from this, that one Diſputant forms one certain Idea of a Word or Phraſe they uſe, and the other Diſputant another. *Bernier*'s Abregé de la Philoſophie *de Gaſſendi*, Tom. I. p. 39.

ive them, or agree upon, one plain Signification, hat is not Equivocal, and which clearly expreſſes he Idea, to which we would apply it. It is eaſy to make our Thoughts fully underſtood, when he, with whom we converſe, knows the Force and true Signification of the Words we make uſe of.

This particular Exactneſs is of great Advantage in writing Books, and in Diſcourſes of Learning. For very often we cannot expreſs the diſtinct Idea of a Thing, without uſing a great many Words to define it. But when we have made this Thing underſtood by all thoſe Words, we annex to one ſingle Word the Idea which is conceived thereof, and this Word ſerves inſtead of all the reſt.

Nevertheleſs we muſt uſe ſome Precaution in this Choice and Adoption of Words, and not alter eſtabliſhed and approved Definitions, which cannot be found fault with. For it is more eaſy to make a Word of current uſe underſtood, to expreſs ſome certain Idea to which it is applied, than to adopt a new one for that Purpoſe. Men having once fixed an Idea to a Word, they don't eaſily come into the Diſpute of it; the ancient Idea will always offer itſelf to the Mind, and eaſily diſlodges that which we would give them by a new Definition. Thus alſo we muſt not change the Etymology of Words, nor endeavour to define them after a new manner, unleſs we find the former Definition of them to be wrong, or that it implies any Ambiguity, which ſome People are very fond of, in order to have an Opportunity of ſupporting their private Sentiments thereby*.

* 'The Abuſe of Words is, that People ſeldom make uſe of the Definition of Terms to prevent Obſcurity, and to fix them to certain determinate Ideas, but leave them in their confuſed State. From whence it happens, that the greateſt

SECT. VIII. *The Definition of a Thing is more or leſs exact, according to the Idea we that have of it.*

THE Exactneſs of the Definitions, which we make, naturally follows from the Exactneſs of our Ideas. For when we would explain

'greateſt Parts of Diſputes are only Diſputes about Words; 'and beſides, they often lay hold of what is clear and true 'in confuſed Ideas, to eſtabliſh what they contain that is falſe, 'which might eaſily be found out, if the Terms were defined.'

Art de Penſer, p. 74.

We muſt in a particular manner attribute the Reproaches contained in theſe two Quotations to the Scholaſtic Philoſophers. As ſoon as the true Signification of Words is clearly ſpecified, the Philoſophy of *Scotus* and St. *Thomas* vaniſhes. It is nothing more than a Troop of Chimeras and Fantoms, that fly away at the Appearance of Truth. Nobody has better deſcribed this pernicious Abuſe of Words than the celebrated Mr. *Locke:*

'Thirdly, another Abuſe of Language is, an affected Obſcurity, by either applying old Words to new and unuſual 'Significations; or introducing new and ambiguous Terms, 'without defining either; or elſe putting them ſo together, 'as may confound their ordinary meaning. Though the Peripatetic Philoſophy has been moſt eminent in this way, yet 'the other Sects have not been wholly clear of it. There 'is ſcarce any of them, that are not cumbered with ſome Difficulties (ſuch is the Imperfection of Human Knowledge!) 'which they have been fain to cover with Obſcurity of Terms, 'and to confound the Signification of Words, which, like a 'Miſt before People's Eyes, might hinder their weak Parts 'from being diſcovered. - ---- To this Abuſe, and the Miſchiefs of confounding the Significations of Words, Logic and 'the Liberal Sciences, as they have been handled in the Schools, 'have given Reputation; and the admired Art of Diſputing, 'hath added much to the natural Imperfection of Languages, 'whilſt it has been made uſe of, and fitted, to perplex the 'Signification of Words, more than to diſcover the Knowledge and Truth of Things.'

Locke, Lib. III. Cap. X.

One would think, that *good Senſe* had lain aſleep for theſe ſix or ſeven hundred Years, and as it were overwhelmed with a Lethargy, which hindered it from acting, and from conducting and inſtructing Men. How have they been employed during the Reign of the Scholaſtic Philoſophy, with Crowds of Chimeras,

plain the Nature or Properties of a Thing, we immediately conſider the Idea, which we have of it; and according to what is in our Mind, we define a Thing well or ill; well, if the Idea, which we have of it, be exact; ill, if it be falſe and very imperfect. Now our Ideas being the eſſential and real Cauſes of our Sentiments, Men are more or leſs knowing, according as their Ideas are more or leſs perfect, by which they are capable of knowing and defining Things. For the Quantity and Diverſity of our Ideas are of no Service for the perfecting of our Underſtanding, or acquiring real Knowledge, but only ſo far as they are exact and true *. The Multiplicity of falſe Ideas tends only to miſlead us from the way of Truth.

Chimeras, and thought they knew wonderful Things, while they were only feeding upon Puerilities, punning upon Words, and amuſed with ridiculous and ſenſeleſs Viſions? St. *Thomas*, as great a Saint as he was, inſtead of making Logic completely ridiculous by *his Being of Reaſon*, had better never have meddled with all theſe Scholaſtic Subtilities, of which he has made Logic the *Subject*, or if you will, the *Object*. *Ens Rationis eſt Objectum Logicæ*. Can any Thing be ſo pitiful, as to eſtabliſh an imaginary Thing, a Nothing, for the Subject of real Science and Learning? For what is *the Being of Reaſon, or of Human Diſcourſe*, but a Non-entity, a Fiction, a Chimera?

The Itch of Diſputing, and the Abuſe of Words, have engaged the Scholaſtic Philoſophers in eternal Controverſies. They all thought alike and yet diſputed. For Example, the *Greek* Commentators upon *Ariſtotle* ſaid, that the *Subject* of Logic is *Demonſtration*. *Scotus* maintained, that it is *Syllogiſm*. Others pretended, that it is *Argumentation*. They all Diſpute with Heat about it, and differ in Opinion only through the Abuſe of Words. For, does not *Argumentation* contain a *Syllogiſm*, which being the cleareſt way of Arguing, neceſſarily leads us to *Demonſtration*? And to form an evident and concluſive *Syllogiſm*; what is that but *Reaſoning* and *Demonſtration*?

* Now though it be a conſiderable Qualification to know many Things, and each of them in Perfection, yet there are ſo very few that are capable thereof, that none need be ſo ſolicitous to gain the Ideas of many Things, as to cultivate and improve the Ideas they have; for it is a greater Excellency to know a little well, than to know a great deal imperfectly.

Bernier's Abregé de la Philoſophie *de Gaſſendi*, Tom. I. p. 81.

SECT. IX. *Of the Cauſes of our Ignorance.*

THE Cauſes of our Ignorance proceed, firſt, from our Want of Ideas. Secondly, for want of obſerving the Connection, that is between the Ideas we have. Thirdly, for want of making due Reflections upon our Ideas. For if we conſider in the firſt place, that the Ideas, which we receive by our Senſes, have no Proportion with the Things themſelves, ſeeing we have not a clear and diſtinct Idea of *Subſtance*, which is the Foundation of all the reſt; we ſhall ſoon be convinced how few exact Ideas we can have. And, not to mention the Bodies which eſcape our Knowledge, becauſe of their vaſt Diſtance, there is an infinite Number of others unknown to us, by reaſon of their exceeding Smallneſs. For as theſe Atoms, or ſubtile Parts, which are imperceptible to us, are the active Parts of Matter, and the firſt Materials ſhe makes uſe of, and on which *ſecond Qualities* and the greateſt Part of natural Operations depend; we are obliged, for want of an Idea of them, to remain in an abſolute Ignorance of what we would know concerning them; it being impoſſible for us to form any certain Notion of them, having no preciſe and diſtinct Idea of theſe minute Particles.

If it were poſſible for us to diſcover by our Senſes, the fine and ſubtile Particles, which are the active Parts of Matter, we could diſtinguiſh their Mechanic Operations, as eaſily as a Watch-maker can tell the Reaſon why a Watch goes, or ſtands ſtill. We ſhould not be put to any Difficulty to explain why Silver diſſolves in *Aqua Fortis*, and not in *Aqua Regia*; or on the contrary,

why

why Gold diſſolves in *Aqua Regia*, and not in *Aqua Fortis*. If our Senſes were acute enough to perceive the active Parts of Matter, we ſhould ſee how the Parts of *Aqua Fortis* work upon thoſe of Silver; and it would be as eaſy for us to account for this ſort of Mechaniſm, as it is for a Clockmaker to know why, and by what Spring, the Motion in a Clock is made. But this Defect of our Senſes leaves us only Conjectures grounded upon Ideas, which perhaps may be falſe; and we can be ſure of nothing with regard to them, but what we gain by a few Experiments, which do not always ſucceed; and whoſe ſecret Operations every one explains according to his own Fancy.

The Difficulty, that we have in finding out the Connection of our Ideas, is a ſecond Cauſe of our Ignorance. It is impoſſible for us to deduce, in any manner, *the Ideas of the ſenſible Qualities which we have in our Minds, from any corporeal Cauſe, or to find out the Agreement or Connection between theſe Ideas, and the firſt Qualities that produced them in us.* Experience convinces of this Truth. It is alſo impoſſible for us to conceive how Thought can produce Motion in a Body, and how Body in its turn can produce Thought in the Mind. We cannot find out how Spirit acts upon Matter, nor how Matter can act upon Spirit. The Weakneſs of our Faculties cannot diſcover the Connection of our Ideas; and the only Succour that we can have, is to have Recourſe to an omnipotent and all-wiſe Agent, which operates by ways that we are not capable of penetrating.

Laſtly, our Indolence, our Negligence, and want of Attention are alſo Cauſes of our Ignorance. We have many times perfect Ideas, whoſe Connection we might eaſily diſcover; but for want

of following theſe Ideas, for want of ſearching for, and finding out middle Ideas, which might inform us what kind of Agreement or Diſagreement there is between them, we often continue in Ignorance.

Theſe, Madam, are the principal Reflections I have thought proper to make upon the manner of acquiring our Ideas, and conſidering them meerly as our firſt Notices of Things. You will tell me, perhaps, that you are as much to ſeek, as when you began this Courſe of Philoſophy. *What have you taught me*, you may ſay? *I am ſtill uncertain how we acquire our Ideas. I ſee I have but a ſmall Number of them, and yet many of that ſmall Number may be falſe. It is impoſſible for me to acquire a great Stock, that can be of any Service to me; to be free with you, I think it is not worth the while to employ ſo much Time in Reaſoning, without being more wiſe, more happy, or better ſatisfied* *.

If thoſe be your Sentiments, Madam, you will do me the Juſtice at leaſt to ſay, that I have followed Nature in theſe Diſcourſes. And to give you further Proofs of my Sincerity, I am going to examine the ſecond Head or part of Logic.

SECT. X. *Of the Actions of the Mind, by which we make a complex Idea of two ſimple ones.*

I Have told you before, Madam, that we underſtand by the Word Judging (upon which this ſecond Part of Logic turns) the Action of affirming what a thing is, or what it is not, by attributing to it what belongs to it, and taking what does not belong to it. This Action of the Mind is called

* *Illiterati non minus nervi rigent.*
Horatius, Epod. VIII.

Add to this Paſſage, another of the ſame Author,
Scilicet & morbis & ſtabilitate carebis,
Et luctum & curam effugies, & tempora vitæ
Longa tibi poſt hæc fato meliore dabuntur.

called Judgment, or Propoſition; becauſe by it we decide what a Thing is, or what it is not. So that as by Conception we meerly and ſimply imagine or think of a Thing, ſo by Judgment we affirm what appertains to it, or what does not; and our Underſtanding, conſidering the different ſimple Ideas which it receives, makes a compound Idea thereof. And this Idea, though produced indirectly by Senſation, is really formed by Reflection, which are the two only Sources of all our Notions, as I have ſhewn you above.

You will obſerve, Madam, that every Propoſition in general is either Affirmative or Negative. An Affirmation is made by the Verb (*Is*) as when we ſay, *Peter is* faithful. A Negation, by joining a negative Particle to the Verb (*is*) as when we ſay Conſtancy *is not* a Crime. Be pleaſed to remember, Madam, that the Noun, which comes before the Verb *is*, (as *Peter* and *Conſtancy* in the Propoſitions I have juſt mentioned) is called the *Subject*; and that which follows the Verb *is* (as *faithful* and *Crime*) is called the *Attribute*. You muſt alſo obſerve, that all Propoſitions are not compoſed of one ſingle Subject, and of one ſingle Attribute; as *Peter is faithful*. But there are ſome that are compoſed of many Words. As when we ſay, *to have no whimſical Humours is the Property of a faithful Lover*, in which Propoſition, *to have no whimſical Humours*, is to put for the *Subject*; and, *the Property of a faithful Lover*, ſerves for the *Attribute*.

SECT. XI. *On what the Truth of Propoſitions depends.*

A Judgment is only ſo far right and true as it attributes to the Subject what belongs to it; and it is upon this Agreement of the

Attribute with the Subject, that the Truth of a Propoſition depends. If I ſay, for Example, that *the Sun is luminous*, my Propoſition is true, becauſe the Sun is really a Body of Light, and the Attribute *Luminous* belongs to it. But if I ſay, *the Sun is opaque*, my Propoſition is falſe, becauſe the Attribute does not belong to the Subject.

The Certainty of our Judgments alſo depends upon the Evidence, which makes them appear ſo. For though, when the Sun is above our Horizon *it is Day*; yet to convince the Underſtanding of the Certainty of this Propoſition, *it is Day*, our Senſes muſt act, and demonſtrate it to us convincingly; our Eyes muſt be open, and aſſure us of the Truth thereof.

Thus as the Certainty of our Judgments depends upon the Evidence, which we have thereof; ſo their Probability, or Appearance of Truth, depends upon this, that they approach nearer to Evidence than to Obſcurity. We yield our Belief to Things, according as they appear to be true.

To accuſtom ourſelves to form right and true Judgments, we ought to furniſh our Minds with ſelf-evident and general Propoſitions, ſuch as are uſually termed *Maxims* or *Axioms*. Theſe are Sources from whence many other Ideas, which have a Tincture of the Purity of their Origin, flow into our Minds. All the Sciences furniſh certain *Axioms*, which are peculiar to them, and which they claim as their Right. Theſe firſt Principles are called *Maxims* or *Axioms*, becauſe they are Propoſitions, whoſe Senſe we no ſooner underſtand than we are convinced of their Certainty. For Example,

It is impoſſible that a Thing ſhould be, and ſhould not be, at the ſame Time.

The

The Whole is greater than a part.

The Negative, or Affirmative of every thing, is true.

Every Number is either equal or unequal.

If to equal Numbers, you add equal Numbers, the Totals will be equal.

Neither Art, nor Nature can make any Thing out of Nothing.

God and Nature do Nothing in vain, &c.

To all theſe Axioms, I will add one more, as evident as any you know, *viz. We need ſeek for perfect Beauty no where but in Madam* ——— perhaps ſome Pretender to Learning, or wrangling Schoolman, may Diſpute the Evidence of this Propoſition; but, let your Eyes, Madam, but caſt one Glance upon them, and they will ſoon be perſuaded of the Truth of what I ſay.

SECT. XII. *Of a Syllogiſm, or right Reaſoning.*

REASONING, or Syllogiſm, as I told you, Madam, at the Beginning of this Diſſertation, comprehends the third Part of Logic. And that which is meant by the word Reaſoning or Syllogiſm, is the Operation which our Mind performs, when from two Propoſitions we draw, by way of Conſequence, a third; and that our Mind being certain of two Ideas, which agree together, paſſes a deciſive Sentence upon their Agreement.

The two firſt Propoſitions, which compoſe the Syllogiſm are called *Premiſes* or *Antecedents*, becauſe they are put before the third or laſt Propoſition, which is called the *Concluſion*, becauſe it finiſhes the Syllogiſm. Thus when I ſay,

They that have a ready Wit, learn any Thing with Eaſe;

Madam ——— *has a ready Wit,*
Therefore Madam ——— *learns any Thing with Eaſe.*

The two firſt Propoſitions are called *Premiſes*, and the laſt the *Concluſion*, as you ſee in reality it concludes the Syllogiſm.

SECT. XIII. *Of the different Sorts of Syllogiſms.*

A Syllogiſm has ſeveral different Forms, according to which it changes its Name. This Variety, and theſe different Kinds of Reaſoning, are ſo little neceſſary for the finding out of Truth, that Men might diſcover it, even without knowing how to form a Syllogiſm. The greateſt part of our Errors ariſing much more from our reaſoning upon falſe Principles, than from our not reaſoning according to our Principles. But leſt you ſhould imagine, Madam, that theſe Forms of Argument have *ſome hidden Myſteries* in them, I am going to explain them to you, as ſuccinctly as I poſſibly can.

That Syllogiſm is called an *Enthymem*, wherein one of the two Propoſitions, which are called *Premiſes*, is ſuppreſſed in the Expreſſion, but is ſtill underſtood; as when I ſay,

They that have a ready Wit can learn any Thing with Eaſe;
Madam—can therefore learn any Thing with Eaſe.

We naturally underſtand that the Mind ſuppreſſes this Propoſition,

Madam ——— *has a ready Wit;*

Which being placed between the two other Propoſitions would form a perfect Syllogiſm. To be ſhort, the firſt Propoſition in an *Enthymem*, in

the Terms of the Schools, is called *the Antecedent*, and the Concluſion *the Conſequent*.

There are beſides this, ſeveral other kinds of Syllogiſms, as the *Hypothetic* and the *Disjunctive*; that made by *Gradation*, and that by *Induction*. But indeed, theſe ſeem to me to be ſo uſeleſs, and the greateſt Genius's * have ſo far deſpiſed them (though ſome have condeſcended out of Cuſtom to make uſe † thereof) that I will not abuſe your Time and Patience in explaining them.

SECT. XIV. *The Truth, or Falſhood of the Premiſes of a Syllogiſm renders it demonſtrative, true, or falſe.*

THIS Rule is ſo far uſeful as that it teaches us, that to reaſon juſtly, our Arguments ought to be founded upon true Principles. This ought

* Of what Uſe then are Syllogiſms? I anſwer, their chief and main Uſe is in the Schools, where Men are allowed without Shame to deny the Agreement of Ideas, that do manifeſtly agree; or out of the Schools to thoſe, who from thence have learned without Shame to deny the Connexion of Ideas, which even to themſelves is viſible. But to an ingenuous Searcher after Truth, who has no other aim but to find it, there is no need of any Form to force the allowing of the Inference; the Truth and Reaſonableneſs of it is better ſeen in ranging of the Ideas in a ſimple and plain Order.

Locke's Eſſay, Book IV. Chap. XVII.

† Conſult here a Note, which is at the Beginning of the ſecond Chapter of the third Part of *L'Art de Penſer*. That Place treats of the general Rules of ſimple uncompounded Syllogiſms. That Chapter and the following, as far as the twelfth, are thoſe which are ſpoken of in the Diſcourſes upon the ſubtile Things for logical Speculation, but which are of little or no Service. Why therefore ſhould I offer them to my Reader, to make him loſe his Time in learning them, and perhaps oblige him to load his Mind with uſeleſs and ſuperfluous Things, which would take up the room of better? The Author of *L'Art de Penſer* was ſenſible of this Truth. Yet either through Weakneſs or Complaiſance for *the Scholaſtic Philoſophy*, he has given us a Dozen needleſs Chapters. Eſpecially, if his Deſign was, as he tells us in his Preface, to teach his Readers every thing that is uſeful and neceſſary in Logic, in the Space of eight or ten Days.

ought always to be preſent in our Thoughts. It will oblige us to examine maturely the Maxims from which we deſign to draw Concluſions.

We muſt never think our Concluſions in Argument are true and evident, unleſs our Premiſes be ſo; and when the two firſt Propoſitions, from which we make our Deciſion, are clear and evident, the third, which we form by the means of their Aſſemblage, becomes alſo concluſive and evident. Thus, if I would prove the Senſibility of Man, I lay down for my Premiſes, that *every Man is a living Creature*, and that *every living Creature has Senſibility*, from whence I draw my third Propoſition, by which I conclude evidently, that *every Man has Senſibility*.

If Men would always endeavour to reaſon in the cleareſt manner they are capable of, they would make a much greater Progreſs in their Enquiries after Truth. But they content themſelves with making uſe of the moſt abſtract Notions. They often forſake the Truth to follow what is uncertain and chimerical; they employ logical Rules to make an ill uſe thereof *, and deceive them-

* The wiſeſt of the ancient Philoſophers did not complain leſs of the pretended Rules, which taught the Art of Reaſoning in a juſt manner. *Seneca* ſpeaks with a great deal of Strength againſt this Rabble of Arguments, on which ſo many different Names have been beſtowed. If it be demanded, ſays he, if any particular Perſon has Horns, will he be fooliſh enough to uncover his Forehead, and cannot he ſatisfy himſelf that he has no Horns, though by ſome Sophiſtical Argument they attempted to prove the contrary? It fares with theſe Philoſophical Subtilties, as with the Tricks of Jugglers, whoſe Deceits are diverting enough; in the ſame manner as the Arguments, the Syllogiſms, the Sophiſms, for what other Name do they deſerve? are not hurtful to thoſe who are ignorant of them, and are of no uſe to thoſe that underſtand them. *Ceterum qui interrogatur an cornua habeat, non eſt tam ſtultus ut frontem ſuam tentet: nec rurſus tam ineptus aut hebes, ut non habere ſe neſciat, quod tu illi ſubtiliſſima collectione perſuaſeris.*

Sic

themſelves and others at the ſame time thereby; they inſenſibly become Sophiſts without perceiving it. They begin their Diſputes with maintaining their Opinions by falſe Principles, in which they proceed to the Abuſe of Words; and in fine, applaud themſelves in having prevented the Diſcovery of Truth by clouding it with Sophiſms *. It is thus the Poet, of whom *Perſius* ſpeaks, applauded himſelf for having filled his Books with ridiculous Antitheſiſes †.

SECT. XV. *Of the Uſeleſſneſs of Syllogiſms, and the Method of Diſputing in Schools.*

TO ſpeak of the Uſeleſſneſs of Logic is the greateſt of Hereſies in the Schools. Without that there is no Salvation. Whoever errs according to Mood and Figure is a great Man; but whoever finds out Truth in a plain manner, by the Connection of clear and diſtinct Ideas treaſured up in the Mind, muſt ſtill paſs for a Fool.

And

Sic iſta ſine noxa decipiunt, quo modo præſtigiatorum acetabula & calculi, in quibus fallacia ipſa delectat. Effice ut quomodo fiat intelligant: perdidi uſum. Idem de iſtis captionibus dico; quo enim nomine potius ſophiſmata appellem? nec ignoranti nocent, nec ſcientem juvant.

L. Annei Senecæ. Epiſt. Lib. Epiſt. XLV.

* After all, when we have to do with Sophiſts, the beſt way is to leave them, as People, who, inſtead of Truth which we are in queſt of, preſent us with Error and Falſhood; or who, inſtead of acting ſeriouſly, divert themſelves with Chicane and Fooleries. I am aſhamed, *ſays* Seneca *very judiciouſly*, that at our Age we ſhould trifle with the moſt important Things. *Mouſe* is a Syllable; a *Mouſe* eats Cheeſe; therefore a *Syllable* eats Cheeſe. Would not this ſtill be more ſubtle thus? *Mouſe* is a Syllable; a *Syllable* does not eat Cheeſe; therefore a *Mouſe* does not eat Cheeſe. Childiſh Follies!

Bernier's Abregé de la Philoſophie de *Gaſſendi*, Tom. I. p. 163.

† *Crimina raſis*
Librat in Antithetis, *doctas poſuiſſe figuras,*
Laudatur; Bellum hoc; hoc Bellum? Perſius *Satyr* I.

And yet for all this, if we carefully examine the Actions of our Minds, we may diſcover, that *we reaſon beſt and moſt clearly, when we only obſerve the Connection of the Proofs, without reducing our Thoughts to the Form of a Syllogiſm* *. We ſhould be very unhappy if it were otherwiſe. For Reaſon would then be the Property of a few Pedants, who really never knew what Reaſon is †. I do not believe that Patriots amuſe themſelves in finding out Truth by Syllogiſms in the Cabinets of Princes, where Affairs are decided of ſuch Conſequence, that all neceſſary Means ought to be employed, to argue and conclude, in the exacteſt manner it is poſſible. And, *if Syllogiſm were the grand Inſtrument of Reaſon, and the beſt Means of employing that Faculty*, I do not doubt but that Princes would require their Privy-Counſellors to learn how to form all ſorts of Syllogiſms; their Kingdoms, and even their Perſons depending upon the Affairs that are deliberated in thoſe Councils. I ſhould be very much ſurprized, if any ſhould attempt to prove to me, that a Reverend Father Profeſſor of Philoſophy in the Convent of *Cordeliers*, though a very ready and ſubtile *Scotiſt*, would make as excellent a Miniſter of State, as Cardinal *Richelieu* or *Mazarine*, who certainly could not form a Syllogiſm according to Rule ſo well as he. *Henry* the Fourth of *France* was one of the greateſt Princes that ſhe ever had; he joined

* What you ſee in *Italic* in this Chapter is taken from Mr. *Locke*'s *Eſſay concerning Human Underſtanding*, Book IV. Ch. 17. where you ſee the Uſeleſſneſs of Syllogiſms clearly proved. The Reader, that would be convinced of this, needs only conſult that excellent Author.

† Theſe Principles will have an Effect contrary to thoſe of the common Philoſophy; for, it is eaſy to be obſerved, that in thoſe who are called Pedants, it renders them leſs capable of Reaſon than they would have been, if they had never learned it. *Des Cartes* Principes de la Philoſophie, Preface.

ed Prudence to his good Senſe, and Wiſdom with his Courage; yet I do not believe he was ever ſuppoſed to have known how to range one Syllogiſm in his whole Life. We ſee every Day a great many People, who reaſon truly and juſtly without ever having had the leaſt Notion of Logical Rules.

Theſe Subtleties ſays *Seneca*, (ſpeaking of Arguments) are of no uſe to clear up Difficulties, and cannot bring the Queſtion to a Deciſion; the Mind makes uſe of them as a Sport for Amuſement, but they are of no real Service; for good and real Philoſophy is very much hurt thereby. It is pardonable to trifle ſometimes with ſuch Fooleries, when we have too much time upon our hands; but yet they are always pernicious; for Perſons are eaſily led aſtray by their Tinſel, and their falſe and ridiculous Subtleties.

If a Syllogiſm be neceſſary for the finding out of Truth, the greateſt Part of Mankind is deprived of thoſe Means. For one Perſon, who has any Notion of Syllogiſtic Moods and Figures, there are ten thouſand who have no Idea thereof. Half of the Inhabitants of *Aſia* and *Africa* never heard of the Name of Logic. There was not a ſingle Soul in all *America*, before the *Europeans* diſcovered it, that knew what a Syllogiſm meant; and yet, there were People on that Continent, who reaſoned with as much Propriety perhaps as our Logicians. We ſee every day Country People, who diſcover as much good Senſe and Exactneſs in Matters of the greateſt Conſequence, which they have been converſant in, as the Doctors of the *Sorbonne*. Men would be very unhappy, if, without the Aſſiſtance of *Ariſtotle*'s Rules, they could make no uſe of Reaſon,

and

and that that Gift from Heaven were of no Service to * them.

The Connexion of our Ideas is more eaſily diſcovered, when we make no Uſe of Syllogiſms, which ſerve only to weaken the Penetration and Judgment of the Underſtanding. *Let us ſuppoſe,* † *that the Word* Animal *is the middle Idea, or, as the Schools call it,* The Medius Terminus, *which the Mind employs, to ſhew the Connexion that there is between* Man *and* Living. *I ask, if the Mind does not diſcover this Connexion as readily and clearly when the Idea, which unites theſe two Terms, is in the Middle, in this natural Argument,* Man——Animal——Living. *As in this other, which is more perplexed,* Animal——Living——Man——Animal? *which is the Poſition that is given to theſe Ideas in a Syllogiſm, to ſhew the Connexion, that there is between* Man *and* Living, *by the Interpoſition of the Word* Animal.

Thus you ſee, Madam, this third Part of Logick is alſo uſeleſs, or of very little Advantage; ſeeing, that if ſyllogizing were neceſſary to the finding out of Truth, Reaſon, which is the Gift of God, would become ſo weak and imperfect, that it could not ſee Things, as we may ſay without

* God has not been ſo ſparing to Men to make them barely two-legged Creatures, and left it to *Ariſtotle* to make them rational, *i. e.* thoſe few of them that he could get ſo to examine the Grounds of Syllogiſms, as to ſee, that in above threeſcore Ways, that three Propoſitions may be laid together, there are but about fourteen, wherein one may be ſure, that the Concluſion is certain, and upon what Ground it is that in theſe three the Concluſion is certain and in the other not. God has been more bountiful to Mankind than ſo. He has given them a Mind that can reaſon, without being inſtructed in Methods of Syllogizing. The Underſtanding is not taught to reaſon by theſe Rules; it has a native Faculty to perceive the Coherence or Incoherence of its Ideas, and can range them right, without any ſuch perplexing Repetitions.

Locke's *Human Underſtanding*, Book IV. Chap. 17.

† There is in all this a great deal of meer Trifling, which is alſo, in whatever Author you find it, very enigmatic and tedious.

Bernier's *Abregé de la Philoſophie de Gaſſendi*, Tom. I. p. 126.

out Spectacles. Whereas the Light of Nature, not being clouded, or under Reſtraints by ſyllogiſtical Forms, diſcovers Truth more readily and clearly, without the Help of Logic than with it. People have been ſtudying for above theſe two thouſand Years to no Purpoſe, to find out ſo many Diviſions and Subdiviſions; cramp Words, that look like conjuring Terms, which, inſtead of enlightening the Underſtanding, tend only to create Difficulties, that hinder it in it's Operations. Happy are they, who, renouncing this Doctrine, which conſiſts principally in confounding Things, come to follow the Rules of Nature, and honeſtly confeſs, that what had been repreſented to them as the great Aſſiſtant of Reaſon, really * does it more hurt than good.

See here the Taliſman, to which the Commentators upon Ariſtotle *and the Schoolmen have tacked Reaſon and the Underſtanding.*

Barbara, Celarent, Darii, Ferio, Baralipton,
Celantes, Dabitis, Fapeſmo, Friſeſomorum,
Ceſare, Cameſtres, Feſtino, Baroco, Darapti,
Felapton, Diſamis, Dataſi, Bocardo, Feriſon.

Muſt not a Perſon be crack-brain'd to invent ſuch Rules as theſe? And where is the Genius, whom the meer ranging of theſe whimſical Words has not employed to little Purpoſe for ſome Time? What may we not expect then from Rules that anſwer the Beauty of theſe Principles, and which are of as little Service to the Mind, as theſe Words, Baroco, Bocardo, Feriſon, *are muſical to the Ear?*

One

* Nothing is more unfit to aſſiſt the Mind than Syllogiſm; which running away with one aſſumed Probability, or one topical Argument purſues that till it has led the Mind quite out of Sight of the Thing under Conſideration; and forcing it upon ſome remote Difficulty, holds it faſt there, intangled perhaps, and, as it were, manacled in the Chain of Syllogiſms, without allowing it the Liberty, much leſs affording it the Helps, requiſite to ſhew on which Side, all Things conſidered, is the greater Probability.
Locke's *Eſſay concerning Human Underſtanding*, Book IV. ch. 17.

One Thing which ſeems very ſurpriſing to me, is, that Philoſophers, who have affected a great Contempt of Scholaſtick Jargon, have preſcribed Rules neither clearer nor more neceſſary than thoſe which they condemn with ſo much Haughtineſs. Mr. *s'Graveſande* in his Introduction to Logic has inſerted a Treatiſe upon Argumentation, or the Art of Reaſoning ſyllogiſtically. He pretends to teach Men to ſpeak and think juſtly, and exactly, by a certain Arrangement of the Letters of the Alphabet. A modern Critic makes a Jeſt of this extraordinary Method. I imagine, ſays he, that theſe Precepts, would make a good Figure in the *Gentleman-cit*; methinks I hear Mr. *Jourdain* ſay *AEE, AOO, OAO, EIO, EAE, EAO.* How fine is this! how full of Learning! this Method of teaching Men: The Art of Reaſoning is is very fine and very lofty! *EEAO, EAE,* &c. Perhaps you will be glad to ſee ſome of theſe Alphabetical Rules, for which Reaſon I have given you a Specimen of * them, by Way of Note. To ſay

* There is a more eaſy Method to prove, that there are but ten concluſive Moods, and this by conſidering at firſt the Premiſes alone, and then by attending to the Concluſion. The four Letters, *a, e, i, o,* cannot be taken by two and two, but ſixteen Ways, as you may perceive by the following Arrangement:

AA, AE, AI, AO, EA, IA, OA,
EE, EI, EO, IE, OE,
II, IO, OI,
OO.

From this Diſpoſition we reject *EE, EO, OE, II, IO, OI, OO. IE* ought likewiſe to be rejected, becauſe the Concluſion would be negative; and by this the great univerſal Term, which ought to be likewiſe in the major; which cannot be in *I.* Thus there remains but eight Diſpoſitions of the Premiſes: *AA, AE, AI, AO, EA, IA, OA, EI.* From *AA,* we cannot conclude but in *A,* or in *I.* From *AE* we cannot conclude but in *E.* In reality the Concluſion in *O* would be good; but it is never uſed when one can be had that is more general; which may always be had in the preſent Caſe, becauſe the leſſer Term is univerſal in the

say the Truth Mr. *s'Gravesande* is not the Inventor of this Method; *Aristotle* * made use of it above two thousand Years ago: Thus these Precepts may be said to be revived from the *Grecians*. I am afraid that they will be as useless to the World, as the Game of the Goose, which is likewise revived from

the minor. From *A I*, *I A*, we only conclude in *I*. From *AO*, *OA*, and *EI*, only in *O*. From *EA*, only in *E*, or in *O*. This being the Case, the following are the only possible Moods of syllogizing, *AAA*, *AAI*, *AII*, *IAI*, which are affirmative Moods; *AEE*, *AOO*, *OAO*, *EIO*, *EAE*, *EAO*, which are negative. *Introduct. a la Philos. contenant. la Metaphys. & la Logique. Liv.* II. *Chap.* XXXV. *p.* 449, *par Mr. s'Gravesande.*

* Πρῶτον μὲν οὐῶ ἔστω στερητικὴ καθόλου, ἡ Α, Β, πρότασις. Εἰ οὐῶ μηδενὶ τῶν Β, τὸ Α ὑπάρχει τῶν οὐδὲν Α, οὐδενὶ ὑπάρξει τὸ Β. Εἰ γὰρ τινὶ, οἷον τῷ Γ, οὐκ ἀληθὲς ἔσται τὶ μηδενὶ τῷ Β, τὸ Α ὑπάρχειν. τὸ γὰρ Γ, τῶν Β, τί ἐστιν. Εἰ δὲ παντὶ τὸ Α, τῷ Β καὶ τὸ Β, τινὶ τῷ Α, ὑπάρξει. Εἰ, γὰρ μηδενὶ, οὐδὲ τὸ Α, οὐδενὶ τῷ Β, ὑπάρξει. ἀλλ' ὑπέκειτο, παντὶ ὑπάρχειν. Ὁμοίως δὲ καὶ εἰ κατὰ μέρος ἐστὶν ἡ πρότασις. Εἰ γὰρ τὸ Α, τινὶ τῷ Β, ἀκὶ τὸ Β, τινὶ τῷ Α, ἀνάγκη ὑπάρχειν. Εἰ γὰρ μηδενὶ, οὐδὲ τὸ Α, οὐδενὶ τῷ Β, ὑπάρξει. Εἰ δὲ γε τὸ Α, τινὶ, τῷ Β, μὴ ὑπάρχει, οὐκ ἀνάγκη καὶ τὸ Β, τῷ Α, μὴ ὑπάρχειν. οἷον, εἰ τὸ μὲν Β, ἐστῶ ζῶον, τὸ δὲ α ἄνθρωπος, ἄνθρωπος μὲν γὰρ οὐ παντὶ ζῶον, ζῶον δὲ παντὶ ἀνθρώπῳ ὑπάρχει.

Sit itaque universalis negativa propositio, *A*, *B*. Si igitur nulli competit eorum quæ sunt *B*, & *B* profecto nulli competet eorum quæ sunt *A*; nam si alicui competet, atque si illud, *C* non erit illud profecto verum *A* nulli competere *B*, nam *C* aliquid est eorum quæ sunt *B*, ut luce clarius extat. Si autem *A* competit omni *B*, & *B* nimirum alicui competet *A*. Nam si nulli competet & *A* profecto nulli competet *B*. Atque omni supponebatur competere. Similis conversio fiet, et si particularis affirmativa sit propositio; nam si *A* competit alicui *B*, & *B* necesse est cuipiam competat *A*. Nam si nulli competat, & *A* profecto nulli competeret *B*, sed alicui supponebatur competere *A*, ut sit *B* quidem animal, *A* vero homo. Homo namque non omni competit animali, ut animal homini competit omni. Commentarii Collegii Coimbricensis e Societate Jesu in universalem Dialectum Aristotelis Stagiritæ primæ pars. Græco Aristotelis contexui adjuncta est Latina Versio, &c. Lib. I. Aristotelis de prior. resolut. cap. 2. pars 2. Comment. page 430. *Aristotle* reasons in the same Manner, and would teach others to reason by these alphabetical Precepts in the six Chapters which follow that, from whence I have extracted this Example. It must be owned that the Model of the *Gentleman-Cit's* Master is very ancient.

from the *Grecians*. I cannot better terminate what I have ſaid upon the Uſeleſſneſs of the different Rules laid down concerning Argumentation and Syllogiſms, than by the Opinion of the moſt wiſe and moſt profound Metaphyſician that ever appeared. *Nothing is more unlikely to aſſiſt in the Mind*, (ſays he) *than the Syllogiſm, which ſupported by one ſole Probability, or by* one ſole Topical Argument, makes an Excurſion, and puſhes this Argument to the utmoſt Confines, till it has hurried the Mind out of the Sight of the Thing in queſtion; inſomuch, that forcing it, if I may ſo ſpeak, to the Aſſiſtance of ſome diſtant Difficulty, it holds it ſtrongly attached thereto, and perhaps even entangled and confined in a Change of Syllogiſms, without giving it the Liberty to conſider on which Side Probability lies, after the whole have been duly examined; ſo far is this Method from furniſhing Aſſiſtance proper for Inſtruction.

Montaigne is not contented with deſpiſing, like *Locke*, the Rules of Argumentation; he pretends, that common Logic ſerves for nothing, but to form dirty and dingy Pedants. 'The moſt certain Mark, 'ſays he, of Wiſdom, is a perpetual Calmneſs of 'Mind: It's State is like the Regions beyond the 'Moon, always ſerene. Theſe *Baroco's* and *Ba-'ralipton's*, which render their Adherents ſo dirty 'and dingy, have nothing to do with it; they 'know nothing of her but by Hearſay, how much 'ſhe is able to calm the Tempeſt of the Soul, and 'to teach a Man to deſpiſe Hunger and Sickneſs, 'not by imaginary Epicycles, but by natural and 'probable Reaſons." If *Montaigne* had ſeen the *AA*, and *OO*, of the *Dutch* Profeſſor, no doubt he would have ſaid the ſame of them as he did of *Baroco* and *Baralipton*.

SECT

SECT. XVI. *Of Method.*

WE underſtand by this Word *Method*, the laſt of the Operations of our Minds, which is ſpecified in the Beginning of this Diſſertation, by the Term *Diſpoſition*, which ſignifies to range or ſet in order what we have thought upon any ſubject, in the moſt natural and clear Manner that we poſſibly can. This Branch of Logic ſeems the moſt uſeful, and the moſt neceſſary. The Rules of ſyllogizing and Argumentation go but a little Way towards Demonſtration, as we have obſerved above; whereas by keeping to an exact Method in directing and ranging our Ideas in order, we may eaſily and inconteſtably prove any Truth by a Train of juſt and regular Arguments.

SECT. XVII. *Two Sorts of Method.*

THERE are two Sorts of Method; one which is made uſe of to diſcover Truth, which is called *analytical*, *i. e.* the Method of reducing Things to their firſt Principles; the other *ſynthetical*, or the Method of Compoſition, which we uſe when we wouldconvince others of the Truths which we are already convinced of.

The principal Operation of Analyſis, or the Method of diſcovering Truth, conſiſts chiefly in conceiving clearly and fairly the Queſtion in hand; in examining attentively and minutely all the Ideas that have any Relation to it. As ſuppoſe the Queſtion ſhould be put, whether or no the Soul is immortal? To come to the Knowledge of this Truth, by conſidering the Nature of the Soul, we obſerve,

in

in the firſt place, that Thinking is an eſſential Attribute of the Soul; and that it has a Power to doubt of every Thing but it's own Thinking, becauſe it could not make that Doubt without thinking. Then we examine what Thinking is; and obſerving that every Thing that agrees with the Notions which we have of Thought does not agree with thoſe which we have of an *extended Subſtance* or *Body*; and perceiving thereby clearly that Thought is not extended, has neither *Breadth* nor *Thickneſs*, we conclude, that it cannot be a *Mode* or *Attribute* of an *extended Subſtance*. From this firſt Argument we infer a ſecond, by which we ſay, that Thought not being a *Mode* of an *extended Subſtance*, it muſt be ſome other Subſtance different from that of *Body*, with which having nothing in common, it conſequently cannot ſuffer any *Alteration* or *Change* that may happen to an *extended Subſtance*. From which Arguments we conclude in fine, that the Soul, not being compoſed of ſeparable Parts, cannot periſh, and is therefore immortal.

This, Madam, is a Sketch of the Manner of ranging our Ideas, in an exact Order and Method, and is the neareſt Way to ſhew you what we underſtand by *Analyſis*. For it is with Method, as it is with other Rules in Logic; it depends more upon the natural Juſtneſs of our Reaſoning, than upon any of *Ariſtotle*'s Precept. And he that has a good Underſtanding and Judgment finds a thouſand times more Aſſiſtance in himſelf than in all the Cautions, Rules, and Precepts*, that belong to Syllogiſm or *Analyſis*.

The

* This is what in general may be ſaid of Analyſis, which conſiſts more in the Judgment and Application of the Mind, than in any particular Rules. *Art de Penſer, Part* IV. *Chap.* II. *page* 361. The ſame Author quotes the four Rules laid down by *Des Cartes* in his *Methode*. He ſays, *That they are too general to be applied to Particulars in a ſimple Analyſis*: And he owns afterwards,

The other Sort of Method, which is called *ſynthetical*, or the Method of Compoſition, tho' it has Rules that are different from the former, is ſuch a neceſſary Conſequence thereof, that whoever performs the firſt well, may alſo ſucceed in the latter. For when any one has a clear Knowledge of Things, and is endowed with a competent Share of Penetration and Judgment for the Diſcovery of Truth, he will have no great Difficulty to communicate that Knowledge to others; ſeeing that which is the moſt eſſential, and the moſt difficult, is already done, *viz.* the diſcovering what is true from what is falſe in our Ideas, and perceiving the Connection thereof; in which the Gifts of Nature are of much greater Advantage than meer Study.

terward, with great Sincerity, that it is almoſt impoſſible to obſerve them. *It is true*, ſays he, *that there is a good deal of Difficulty to put theſe Rules in Practice.*

To what Purpoſe is it to preſcribe Rules for the Mind to aſſiſt it in performing it's Functions, which it does much better naturally, than when it is cramped by Rules that are difficult to be obſerved, and which only muddle the Underſtanding. I am not an Enemy to all Rules, but I would have them exceeding plain, eaſy to be underſtood, and eaſily put in Practice. I could wiſh that the Mind of Man might be treated as *Guy Patin* would have ſick People treated. He was for ſweet and Anodyne Medicines. He would have them kept to Caſſia and Rhubarb. He was perpetually crying out againſt emetic Wine, and empirical Medicines. I look upon the Schoolmen as the Quacks of Human Underſtanding, and their Philoſophy as emetic Wine, which are as pernicious to the Mind, as thoſe given by Mountebanks are to the Body.

The End of the Second Diſſertation.

Philoſophical Diſſertations,

Concerning the UNCERTAINTY of

HUMAN SCIENCES.

DISSERTATION III.

Concerning the general Principles of Natural Philoſophy.

SECT. I. *The* INTRODUCTION.

THOUGH the general Principles of Natural Philoſophy be more uncertain than thoſe of Logic, they have however ſomething more ſatisfactory. If we cannot evidently demonſtrate the Truth thereof, the Mind at leaſt amuſes and exerciſes itſelf agreeably in the Doubts which it raiſes upon that Subject; and if, after having reaſoned a long while upon theſe firſt Principles of Things, we receive but little Inſtruction, and real Knowledge, we have however the Satisfaction of being innocently employed, and of having

having had pleaſant and agreeable Dreams. In this Light I look upon the Diſputes concerning a Vacuum, the Diviſibility and Eſſence of Matter, concerning Place and Space, and a great many other Queſtions, which have been debated for theſe three thouſand Years, and will be debated to the End of the World. I ſay it again, they are only pleaſant Dreams, that make the Time paſs on ſmoothly, while we are entertained with them. And I think the moſt zealous natural Philoſopher cannot be offended at theſe Expreſſions, ſince ſome of great Fame amongſt them have ingenuouſly confeſſed, that after forty Years Study they were as much to ſeek, and had arrived at as little Certainty, as when they firſt began that laborious Enterpriſe.

It is not with Philoſophy, ſays *Bernier*, *as it is with Arts; the more we ſtudy them, the more learned we become therein. But the more we enquire into the Objects of Natural Philoſophy, the more we diſcover our Ignorance. I have philoſophized between thirty and forty Years, and thought I had arrived to Certainty in many Things; but alas! I begin now to doubt thereof; and what is worſe, there are ſome Things of which I can no longer doubt, deſpairing of ever being able to find them out.*

We can hardly explain the Incertitude of human Knowledge more clearly. It is not a mean Genius that is led into Doubts, becauſe he cannot comprehend the Difficulties of Nature; it is a Philoſopher in general Eſteem, who did not find out his Doubts till after forty Years Study. Neither is he the only Man that has been thus honeſt. There have been ſome great Genius's amongſt the illuſtrious Men of all Ages, and all Nations, who having as much Sincerity as Penetration and Judgment, have frankly owned this Incertitude, which the Vanity of

other

other Philoſophers would not let them acknwledge. *Tully*, after having examined the different Hypotheſes of Philoſophers concerning the Eſſence of the Soul, leaves it at laſt to ſome God to determine which is the trueſt. *Harum Sententiarum quæ vera ſit Deus aliquis viderit.*

There were a great many Philoſophers in *Tully*'s Time as great Sceptics as himſelf; but there were few that were as ſincere. Moſt learned Men are like Lovers, who are ſenſible of the Imperfections of their Miſtreſſes, but would be at their Wits End, if the Public ſhould come to the Knowledge of them. Thus alſo Philoſophers think it derogatory to their Science to confeſs that an Opinion, which they have once embraced, is doubtful.

To get above this Prejudice, that is common to moſt of the Learned, a Man muſt have a ſuperior Genius, ſuch as is poſſeſſed only by Scholars of the firſt Claſs. When Men have but a moderate Share of Learning, they are apt to think themſelves certain and ſure in their Opinions; but when they attain to a greater Degree of Science they begin to doubt of many Things, which they firmly believed before. 'It happens, ſays *Montaigne*, to Perſons that are truly learned, as it 'happens to Ears of Corn; they grow and lift their 'Creſts upright, ſo long as they are empty; but 'when once they are filled with ripening Grain, 'they begin to be more humble, and hang down 'their Heads *." Do but aſk Mr. *Locke* what is the Extent of our Knowledge, and he will tell you frankly, that it is not only below the Reality of Things, but alſo that it does not come up to the Extent of our Ideas. The truly learned Man will affirm nothing to be abſolutely certain, but ſelf-evident

* *Montaigne's Eſſays*, Lib. II. p. 467.

evident Principles. Whatever is doubtful appears to him to be doubtful. Always attentive to the Diſcovery of Truth, he only perceives it, when it breaks through the Dimneſs with which it is ſurrounded, and it offers itſelf clearly to his Eyes. He has too much Knowledge and Judgment to impoſe upon himſelf; and too much Good-nature to require that Men ſhould take his Conjectures for real Proofs.

When *Gaſſendus* debates a Queſtion, that is ſuſceptible of Doubt, he is far from deciding it with a magiſterial Air. After he has ſet forth the different Reaſons which may be alledged *pro* and *contra*, he contents himſelf with declaring which Opinion ſeems to him to be the moſt probable. He uſes the moderate Term *Videtur*, inſtead of the poſitive Concluſions, which the Schoolmen are ſo fond of. He knew the Imperfection of human Knowledge, and was too learned to give into that deciſive Method. He conſidered, ſays one of his Diſciples, that our Sight is too ſhort › penetrate original Principles, and diſcover firſt immediate Cauſes. He thought it was too great a Preſumption to decide ſo magiſterially of Things, as ſome of our modern Philoſophers do*. By theſe laſt Words he means the *Carteſians*, who, generally ſpeaking, are guilty of giving their Deciſions with too much Aſſurance; but yet their Aſſurance is only a doubtful Aſſent, in compariſon of the infallible Deciſions of the Schoolmen. Nay, there are ſome famous *Carteſians*, who freely confeſs, that there are many Queſtions, that we need heſitate † but little upon, as being im-

* *Bernier*'s Abridgment of *Gaſſendus*'s Philoſophy, Tom. I. Preface.

† Is it poſſible that a Creature ſhould be made in Eternity? Can God make a Body infinitely great? A Motion of infinite Swiftneſs? &c

impoſſible to be reſolved. We find none of this Sincerity in the Schoolmen, nor their Followers. Every Man who has had the Misfortune in his Youth to be educated a Peripatetic, a Jeſuitiſt, a Thomiſt, a Scotiſt, *&c.* imagines his Eyes are able to diſcover the moſt hidden Secrets in Nature; he thinks he can penetrate the higheſt Heavens, but he meets with the ſame Fate that *Thales* * did, who, being too intent in contemplating the Stars, fell down a Precipice that he was aware of. This is the Fate of a Scotiſt; he knows what is doing above his Head, but is † ignorant of what is at his Feet; far from being arrived to the higheſt Degree of Science, every Step he takes plunges him into Error, and leads him out of the right way. It would be better for him, if he thought he knew nothing, than to be perſuaded he knows every thing ‡.

or a Multitude infinite in Number? Is an infinite Number even or odd? Can one infinite Number be greater than another? The Man that ſays without Heſitation, I know nothing of theſe Things, is as well skilled in a Moment, as he that ſtudies twenty Years upon theſe Matters; and the only Difference that there can be between theſe two is, that he who endeavours to make himſelf Maſter of ſuch Queſtions is in Danger of falling one Degree below meer Ignorance, and that is to think he knows what he does not.
Art de Penſer. Part IV. Ch. 1. p. 347.

* Λέγεται δ' ἀγάσωνος, ὑπὸ γραὸς ἐκ τῆς οἰκίας, ἵνα τὰ ἄστρα κατανόησι, εἰς βόθρον ἐμπεσεῖν, καὶ αὐτῷ ἀποιμώξαντι, φάναι τὴν γραῦν. Σὺ γὰρ ὦ Θαλῆ τὰ ἐπὶ ποσὶν οὐ δυνάμενος ἰδεῖν τὰ ἐπὶ τῶν οὐρανῶν οἴει γνώσεσθαι.

Fertur cum domo ab anu educeretur, contemplandorum ſiderum cauſa in foſſam incidiſſe ingemiſcentiſque dictum ab anu. Qua ratione Thales, quæ in cœlis ſunt comprehenſuram te arbitraris, qui ea quæ ſunt ante oculos, videre non vales? Diog. Laert. de vitis, &c. Clarorum Philoſophorum, &c. Lib. I. Segm. 34.

† *Quod eſt ante pedes nemo ſpectat; Cœli ſcrutantur Plagas.*
Cic. de Divinitat. Lib. II.

‡ Thus, when Men maintain falſe Principles, the more they cultivate them, and the more Pains they take to draw Conſequences

The firm Belief that Men have had for a long time, of being very well aſſured of the Truth of certain Principles, which nevertheleſs were falſe, has been a prodigious Hindrance to the Diſcoveries, which might have been made in the Knowledge of Experimental Philoſophy. If after many Diſputes, Men had frankly owned that firſt Principles could neither be demonſtrated nor evidently known; and that being ſatisfied with the Diſcoveries that had been made, they had endeavoured to improve them by Experiments, in order to obtain ſtill further Lights; I do not queſtion but that they might have made as great a Progreſs, as has been done of late Years, ſince Experimental Philoſophy has been made the principal Study. It is not, Madam, that this Philoſophy is without its Doubts and Uncertainties; but they are fewer in Number. And though in ſome Experiments we may err in the manner of explaining their Effects, there are many others, of which we obtain a Knowledge that may be called certain. Yet, generally ſpeaking, Certainty may in a ſtrict Senſe be denied to that Knowledge, which we acquire even by Experiments in natural Philoſophy.

We have but very imperfect Ideas of thoſe Bodies that are properly the Objects of our Senſes; and we cannot abſolutely determine the way and manner how the firſt Principles, or if you will, the firſt active Parts of Matter, are moved and perform their Operations. Theſe eſſential Workmen of natural Things are hid from our Eyes. We

quences therefrom, thinking that the way to become Philoſophers, the more they wander from the Knowledge of Truth and Wiſdom. From whence we muſt conclude, that they who have learned the leaſt of what till now has been called *Philoſophy*, the more capable they are of learning what is true.

Des Cartes Principes de la Philoſophie, Preface.

We ſee in general the Effects which they produce, but we have no Idea of the firſt Springs that put them in motion. Thus, in ſome Experiments, a *Carteſian* can explain their Effects by the Help of his ſubtile Matter, the *Gaſſendiſts* by *Atoms* and *Vacuums*, and the *Newtonians* by the Help of Attraction; and yet there muſt be a wide Difference in the various manners of Operating. But all theſe Secrets are hidden from us; we only begin to perceive things when they are almoſt at an end *. Nature is like a Player with Cups and Balls; ſhe only ſhews us the laſt Effects of her Operations; and this is always enough for our Utility, and the Knowledge that is neceſſary for us. Of what Significancy is it to us to know how firſt Principles act, provided we know how to make them act, and infallibly produce the Effects which we deſire, and which are of Service to us †? What is it to me, whether Atoms act, and have their Motions in a Vacuum; or

* I am apt to doubt, that how far ſoever human Induſtry may advance uſeful and experimental Philoſophy in Phyſical Things, ſcientifical will ſtill be out of our Reach; becauſe we want perfect and adequate Ideas of thoſe very Bodies, which are the neareſt to us, and the moſt under our Command --- We have but very imperfect and incompleat Ideas of Bodies ---- Diſtinct Ideas of the ſeveral ſorts of Bodies that fall under the Examination of our Senſes, perhaps, we have; but adequate Ideas I ſuſpect we have not of any one amongſt them. And though the former of theſe will ſerve us for common Uſe and Diſcourſe; yet whilſt we want the latter, we are not capable of ſcientifical Knowledge; nor ſhall ever be able to diſcover general, inſtructive, unqueſtionable Truths concerning them.

Locke's Eſſay concerning Hum. Underſtand. Lib. IV. Cap. III

† To what purpoſe, for example, are long and ſubtile Diſputes concerning the Diviſibility of Matter? For put the Caſe, it cannot be poſitively decided whether it be infinitely diviſible or not, is it not ſufficient for us that we know, that it may be divided into Parts ſmall enough to ſerve all the Occaſions, which we have for it.

Robault, Traité de Phyſique, Preface.

that a ſubtile Matter fills that Vacuum; or whether there be any ſuch Thing in Nature or not; if I do that with this ſubtile Matter, that I do with Atoms, and with Atoms what I do with the ſubtile Matter?

SECT. II. *Whether or no the World be eternal? The Syſtems of thoſe who believe it is.*

THE firſt Enquiry, that preſents itſelf in the Study of natural Things, is concerning the Creation or Eternity of the World. It is natural, before we dive into Knowledge of the particular Properties of a Thing, to examine how that Thing was made; and there is no Perſon, who taking a View of the World, and is deſirous to unravel the Myſteries thereof, but who will at firſt think of the Manner how it was made. This Enquiry has divided the Opinions of all the ancient Philoſophers, and would ſtill make a Diviſion amongſt the Philoſophers of our Time, if Divine Revelation had not inſtructed us how the World was created.

To examine with Attention, and without Prejudice, the different Syſtems of the *Pagan* Philoſophers concerning the Creation, or the Eternity of the World, you muſt diveſt yourſelf for a time of the Notions that you have acquired by Revelation, and view the Sentiments of thoſe Ancients by the meer Light of Nature.

I beg of you therefore, Madam, to obſerve in the firſt Place, that all the ancient Philoſophers were perſuaded, that out of nothing, nothing could be made. Even thoſe that maintained, that the World had a Beginning, thought that the Matter, of which it was made, was eternal, and

and had always had an Exiſtence. This is that Matter, which *Ovid* calls the *Chaos*, and *Epicurus* calls *Atoms*, which having no mutual Connection, floated about in the empty Space.

It ſeems, that this Opinion of the ancient Philoſophers, who had only the Light of Nature for their Guide, was founded upon Reaſons which they thought evident. If, ſaid they, ſomething may be made from nothing, and if nothing can produce Bodies, we ſhould every day ſee new Productions, of which we could have no Knowledge. Every thing might indifferently ſpring from every Thing, and proceed without Order or Method, from any Place, or any Cauſe; and if Bodies and Subſtances were created from nothing, all Seeds ſo unchangeably ſpecified and determined would be of no ſervice. All ſorts of Animals and Plants * would be produced hap-hazard from all ſorts of Seed. We ſhould perpetually be ſeeing new Creatures proceed from Nothing, and they would produce others as Chance ſhould direct. Whereas we ſee, on the contrary, a perfect Order and Harmony in the Works of Nature; all Things have their Riſe from certain Sources, from whence they always proceed. They require certain Seed, Matter, Nouriſhers, Places and Diſpoſitions proper to each Claſs. Corn, Herbs, Fruits grows by little and little. And ſo far is

* *Nam ſi de nihilo fierent, ex omnibus rebus,*
Omne genus naſci poſſet, nil ſemine egeret.
E mare primum homines, e terra poſſet oriri
Squammigerum genus, & volucres erumpere cælo,
Armenta atque aliæ pecudes, genus omne ferarum,
Incerto partu culta ac deſerta teneret.
Nec fructus iidem arboribus conſtare ſolerent,
Sed mutarenter, & ferre omnia poſſent.
Quippe ubi non eſſent genitalia ſemina quoque,
Qui poſſet mater rebus conſiſtere certa?
Lucretius *de Rerum Natura, Lib.* I. *V.* 160 *& ſeq.*

nothing from producing Trees, and making them ſpring out of the Earth in an inſtant, that Men are obliged to cultivate it, and aſſiſt it in its Productions.

It was impoſſible therefore, that the ancient Philoſophers, being without the Aſſiſtance of Revelation, ſhould believe Matter was created. For, though ſome amongſt them admitted a firſt intelligent Principle, all that they could do by the Help of the Light of Nature, was to conſider it as co-eternal with Matter. How could they have ſurmounted a thouſand Difficulties beſides, without that Submiſſion, which we owe to that Religion that determines our Doubts? If the firſt Cauſe, ſaid they, or the firſt univerſal Being created Matter, he muſt have taken it either from within himſelf, or from without himſelf; if he took it from within him, he is not infinite, ſeeing this Matter which was in him muſt make at leaſt a Point; and the Space that a Point occupies may be meaſured. He alſo could not take it from without himſelf, for he would not be infinite if there was any thing beſides himſelf. If any anſwer, that he neither took it from within himſelf, nor from without himſelf, but created it by the meer Power of his Will, they will not be much the nearer. For, to ſay that God make Matter by his Power, is to ſay, that he made it himſelf; the Attributes of God are not diſtinct from God; the Power of God is God himſelf. If it were not ſo, there would be many Infinities. His Juſtice and his Mercy are as infinite as his Power. If theſe Qualities were ſeparate in the Deity, there would be as many Infinities as there are Attributes; which cannot be; there can be but one Infinite, for the Idea of Infinity excludes every Idea of Augmentation. Thus, in ſaying,

that

that Matter is formed by the Power of God does not ſolve the Difficulty. The Power of the Deity is the Deity himſelf. The Queſtion, to know whether he took Matter from within, or from without himſelf, ſtill remains.

There is yet a new Difficulty more conſiderable than the former. A Being ſupremely perfect, ſuch as God is, could not create a Being full of a thouſand Imperfections. It is contrary to the Eſſence of a perfect Being, that there ſhould proceed from him another full of Faults, and that theſe Faults ſhould greatly ſurpaſs his Virtues. There is nothing ſo imperfect as Matter: We readily perceive the Imperfections thereof; therefore it could not be created by God. It could not create itſelf, therefore it muſt have exiſted from all Eternity. The *Chineſe* Letters are full of this Argument againſt the Miſſionaries, and it appears, that the Reaſons which they make uſe of againſt them, do not ſeem to them very concluſive. Nothing is equal, ſays an ingenious Miſſionary, to the Obſtinacy of the *Chineſe* Athieſts, when we object to them, that the beautiful Order, which reigns throughout the Univerſe, could not be the Effect of Chance; that all Things which exiſt, were created by a firſt Cauſe, which is God: then they immediately reply, God is the Author of moral and phyſical Evil. It is in vain to ſay, that God, being infinitely good, cannot be the Author of Evil; for then they add, that God is not the Author of all Things which exiſt. When we repreſent to them, that Evil and Sin are the Conſequences of the bad Uſe of Free-Will in the Creature, they anſwer very cooly, that this itſelf proves that God did not create all things; for ſince there are other Beings beſides himſelf, who have the Power of Creation, ſince there

there are other Beings which do not owe their Origin to him, he is not the only Cauſe of every thing that exiſts in the World. It is to no Purpoſe to reply, as one ſaid to me in a Letter, for you muſt own, that if God is the Author of every thing which exiſts, he is the Cauſe of moral and phyſical Evil. I did all that I could to make him comprehend that Evil and Sin proceeded from Non-entity, and from nothing; for this Purpoſe I made uſe of the Reaſonings and Demonſtrations which Mr. *Deſcartes* publiſhed in his Meditations; but he made a Jeſt of the Authority of this great Man, and anſwered me with Diſdain, that nothing could not be the Cauſe of ſomething; and if God was the Author of all the Good which exiſts in the World, and that the Evil which overwhelms the Univerſe, proceeds from a Non-entity, the Power which *Nothing* has to create Beings, would be extended as far as the Power of God, which is abſolutely abſurd and ridiculous. In ſhort, he maintained, that moral and phyſical Evil are as poſitive Beings as moral and phyſical Good; and when I objected, that Evil is a Privation which depends upon Non-entity, as Sickneſs is the Privation of Health, he replied that we might as well affirm, that Health is a Privation of Sickneſs; in a Word, that a Man who takes another's Riches from a Motive of Covetouſneſs, performs as real and poſitive an Act, as one, who gives Alms to a poor Man, from a Motive of Charity; and that, in ſhort, the Acts of the Underſtanding of theſe two Men are equally real and poſitive.

Whether it was owing to my ſmall Capacity, *adds the Father*, or whether the *Chineſe* Language had no Term which anſwers to thoſe which are uſed to clear up

up theſe Matters in our Schools of Divinity, it was not poſſible to convince him of his Error.

There are many Objections that may be made againſt this Opinion; but it muſt be obſerved, that we are beholden to Revelation for it, with regard to the Idea that it has given us of God; whereas that which the Pagans had was obſcure and dark, and ſubject to a thouſand Doubts. All the ancient Philoſophers were ſo far from believing that God created Matter, that they thought him to be material. The *Epicureans* and *Stoics* were agreed in this Point; and *Tully* examining the different Opinions of all the Philoſophers concerning the Deity, does not ſo much as take Notice of *Plato*'s Sentiment, who was the only one, who was really acquainted with the Spirituality of God. Not but that *Tully* had a very great Eſteem for *Plato*; but he looked upon his Notion of the Deity as wholly unintelligible *. And yet, though *Plato* confeſſed that God was not material, yet he had nevertheleſs a very erroneous Idea of him in many Reſpects †. And we may conſider theſe odd, falſe and different Notions, which the greateſt of the Pagan Philoſophers had of the Deity, are ſo many demonſtrative Arguments againſt innate Ideas. But this is not the Place to ſhew how little Certainty there is in theſe firſt Notions, which ſome pretend the Soul brings into the World with her, and which are ſo confuſed, ſo various in Men, and of ſo little Service towards diſcovering the Deity, and the

* Quod Plato ſine corpore Deum eſſe cenſet, id quale eſſe poſſit intelligi non poteſt.

Cicero de Nat. Deor. Lib. I.

† It muſt be allowed, that *Plato* having been taught by *Socrates*, has ſaid very excellent Things of the Nature of God, although mixed with Errors; as when he teaches us, that there are Gods inferior to the Supreme God, who created the World.

Arnauld Seconde Denonciation du Péché Philoſophique, p. 93.

the Worſhip that he ordains. I would only have you obſerve, Madam, how difficult a Thing it was that the ancient Philoſophers ſhould by the Light of Nature only come to ſuch a clear Knowledge of God, as to be able to infer that he, being from all Eternity a pure and unmixed Spirit, could create Matter.

It is no eaſy Thing, ſays *Bayle*, for a Man to conceive clearly what are the Properties of an infinite Being, or what are not. Does he act neceſſarily, or with an intire Liberty of Indifference? Does he know, love, hate by a pure and ſimple Act, the paſt, preſent and future, Good and Evil, the ſame Man ſucceſſively juſt and unjuſt? Is he infinitely good? He muſt be ſo. But then whence comes Evil? Is he unchangeable, or does he change his Reſolutions? Is he perſuaded by our Prayers? Is he extended? From whence comes Extenſion? Many ſuch Queſtions, which preſent themſelves to our Minds, aſtoniſh and confound us. Incomprehenſibilities meet us every Step we take. We turn on this Hand to avoid apparent Impoſſibilities, and we find as great on the other. The Philoſophers of our Time *, who have diſtinguiſhed themſelves as much by their Piety as their Learning, do not think they injure Religion, by allowing that it is impoſſible that we ſhould have, notwithſtanding the Aſſiſtance of Revelation, diſtinct and adequate Ideas of the Power of God, and in ſhort, of any Thing that is infinite †. Therefore we need not wonder if the Ancients,

* *Bayle*'s Continuation of *Penſées Diverſes*, written to a Doctor of the *Sorbonne*, on Occaſion of a Comet that appeared in the Year 1680. Tom. I. p. 81.

† The greateſt Abridgment that we can make of the Study of the Sciences, is never to trouble ourſelves in an Enquiry about Things out of our reach, and what we cannot reaſonably hope to comprehend. Of this ſort are all Queſtions relating to

Ancients, who were involved in *Pagan* Darkneſs, could not be perſuaded, that God was a ſpiritual Being, and that Matter was created out of nothing. This laſt Opinion ſeemed to them to be abſurd and ridiculous.

Thus all the ancient Philoſophers * were unanimouſly agreed, that the firſt Matter had been from all Eternity, and the only Diſpute amongſt them was about the Time when the regular Diſpoſition and Order, which we now ſee in the Univerſe, began. Some believed that the Regularity and beauteous Order, which we ſo much admire in the World, were produced and formed by a firſt intelligent Cauſe, which they made co-eternal with Matter. Others thought, that Chance and the fortuitous Concourſe of Atoms threw Things at firſt into the Diſpoſition that we ſee them in. And, in fine, many Philoſophers have maintained that the World, ſuch as we now behold it, was ſuch from all Eternity; and that the Ranging and Order of Things therein are of the ſame ſtanding with Matter itſelf. *Plutarch* tells

to the Power of God. ---- Our Underſtanding being finite, is dazzled and loſt in Infinity, and overwhelmed with the Croud of contrary Ideas that it furniſhes. *Art de Penſer*, Part IV. Chap. I. p. 374. This Book was compoſed by two or three illuſtrious Solitaires of *Port-Royal*.

* Radix autem errorum Philoſophorum illa, alia æterna, præter Deum, ponentium fuit, quia nihil ex nihilo fieri poſſe putabant, etiam a prima cauſa; ſed ex aliqua materia. Ob id autem Mundum æternum aut Materiam æternam, ex qua Mundus in tempore fieri poſſet, conſtituebant, & ita fatetur *Averro. Comment.* 4. ubi id oſtendit quod ex nihilo nihil fit, & dicit vulgus exiſtimare quod aliquid poteſt ex nihilo fieri, quia decipitur in duobus. Alterum eſt quod putat vulgus nihil eſſe, quod non videt. Et quia aliquando experitur fieri aliquid viſibile ex eo, quod non videt, puta ex nihilo fieri, quod tamen falſum eſt. *Franciſci Toleti Societ. Jeſu Commentaria, una cum quæſtionibus in octo Libros Ariſtotelis de Phyſica Auſcultatione*, &c. *Comment. in Lib.* VIII. *Phyſ. Cap.* 2. *fol.* 209. *verſ.*

tells us, that *Parmenides*, *Meliſſus*, the *Chaldeans*, and *Pythagoras* were of that Opinion.

Of all the learned Men who have aſſerted the Eternity of the World, *Ariſtotle* * has maintained that Tenet with the greateſt Reſolution. Although he often changed his Opinion upon other Subjects, he never varied in that, but always defended it with Vigour; he laughed at them who were of a contrary Belief; and ſaid, ſpeaking of them, that they gave him ſurprizing Apprehenſions of Terror; that for a long time he had been in no fear but that of the Fall of his Houſe, which was grown old and ruinated; but that he had now frightful Notions in his Head, ſince they would perſuade him that the World, which had a Beginning, muſt certainly have an End, and that conſequently it would fall like an old Houſe, and moulder into Duſt. This Philoſopher's principal Reaſons for his Opinion were theſe. Motion, ſaid he, † muſt be eternal. Thus Heaven and the World, which is in motion, muſt be eternal. I prove it thus: *If there was a firſt Mover, as all*

* Mundum eſſe genitum omnes antiqui Philoſophi ante ipſum Ariſtotelem poſuerunt, ut Anaxagoras, Democritus, Empedocles, Meliſſus, Plato cum cæteris; ſed ipſe Ariſtoteles omnium primus ingenitum, et æternum fecit, ut de ſe ipſemet ait 1. de Cœlo, Text. 102. Imo vero ab ipſomet Deo mundum fuiſſe factum aſſuerit Plato in Timæo una cum tempore, et duraturum perpetuo, ſicut et nos: et ante illum quoque Anaxagoras factum eſſe a Mente dixit, et infinito ante tempore Mentem anteceſſiſſe, et poſtea Mundum feciſſe, quam Deum haud dubie eſſe intelligebat. *Id. ibid. Col.* I.

† See here's another Argument, almoſt like the former. *Si Mundus incepit, pariter etiam tempus; ſed hoc non potuit habere initium, ergo nec ipſe Mundus. Minor probatur: Incepit tempus, ergo dabitur primum nunc, ante quod non fuit tempus. Tunc ſi cuilibet nunc correſpondet mutatum eſſe in motu (non enim tempus eſt extra motum) ergo illi primo nunc, reſpondet mutatum eſſe in aliquo motu. At ante quodlibet mutatum eſſe eſt motus, ergo etiam anteillud nunc erit tempus, quod ſit in illo motu. Et ſic nunquam dabitur primum nunc ante quod non ſit tempus: non igitur principium habere poteſt.* Id. ibid. fol. 211. Col. 2.

all Motion ſuppoſes a Mover, that Mover muſt certainly either be created, or be eternal, but yet at reſt, by reaſon of ſome Obſtacle. Now ſuppoſe it which way you will, the Conſequence will be abſurd; for if this firſt Mover be created, it is ſo by Motion, which by Conſequence will be prior to the firſt; and if it was eternally at reſt, the Obſtacle could not be removed without Motion, which again will be prior to the firſt.

Among other Arguments of *Ariſtotle*, the following is one, which is not wholly free from embarraſſment. If the World was created, it may be deſtroyed, for whatever had a Beginning ought to have an end. The World is incorruptible and unalterable, therefore it is eternal and uncreated. He brings the following Argument to prove the World is incorruptible. If the World can be deſtroyed, it muſt be naturally by him who created it; but it cannot be deſtroyed by him, therefore the World is eternal. If we ſuppoſe that God has the Power to deſtroy the World, then it is neceſſary to enquire, whether the World is perfect or not. If it is not, it was not created by God, becauſe a perfect Cauſe can produce nothing imperfect, otherwiſe God muſt be ſuppoſed to be a defective Being; which is abſurd. If on the other hand the World is perfect, God cannot deſtroy it, becauſe every thing that is bad, is contrary to his Eſſence, for it is the Nature of an evil Being, to hurt things that are good *. I might bring, in this Place, ſeveral other Objections of

* Si Mundus eſſet generatus, utique deſtrui poſſet: ſed Mundus eſt incorruptibilis, ergo fuit ingenerabilis. Minor probatur. Si Mundus corrumpi poſſet, maxime ab eo qui fecit eum: Sed ab hoc non poteſt, ergo a nullo. Probatur minor. Si a Deo corrumpi poteſt, et id eſt poſſibile, ponatur in eſſe: tunc vel mundus erat perfectus, vel non. Si non: ergo nec cauſa fuit perfecta,

of *Ariſtotle*; but as they are very ſubtile, I am not willing to engage your Attention too much; and I ſhould be afraid of your ſaying, that I am a Maſter who leads his Scholars through Paths as thorny, as thoſe wherein the Philoſophers travel daily, whoſe Characters I have ridiculed.

To this Argument *Ariſtotle* adds many others. He maintained *, that God and Nature would not have always acted that which is the beſt, if the Univerſe were not eternal, ſeeing God having ever thought that the putting this World into the Order it is in, was good and proper, had put off the making of it for a whole prior Eternity.

I ſhall content myſelf with ſaying, that the Opinion of this Philoſopher was ſo much the more probable, as that there are much fewer Difficulties to be reſolved in the Syſtem of the Eternity of the World, than in thoſe which oppoſe it. For ſince all Philoſophers of every Sect admitted the Exiſtence of Matter from all Eternity, it was much more natural to believe that Order was co-eternal with it, than to leave this firſt Matter uſeleſs and inactive, as well as the firſt intellectual Principle, which exiſted with it, if any

perfecta, quod abſonum eſt. Si autem perfectus fuit, ergo a Deo diſſolvi non poteſt, quia pravi hominis eſt et vitium perfecta deſtruere: at Deus nullam poteſt committere pravitatem, et ſic nec mundum deſtruere. *Id. ibid.*

* Si deus fuit ab æterno, et mundum non produxit, id petitur ſtatim: Aut potuit, et voluit, aut nec potuit, nec voluit: Aut voluit, ſed non potuit: Aut potuit, ſed non voluit. Si primum detur, profecto mundus fuit ab æterno. Si vero alterum, quod nec potuit, tunc nec voluit, ſequitur quod nec poſtea vellet nec poſſet, et eſſet imperfectus et perfectior poſtea. Si tertium, quod voluit ſed non potuit, pariter eſſet id imperfectionis, quæ repugnat primo principio. Si quartum, potuit, ſed non voluit, fuit invidus; quia cum poſſet bonum communicare, noluit id facere. Cum igitur nihil ex his dici poſſit, ſequitur quod mundus æternus fuit. *Id. ibid. p.* 211. *Col.* 1.

any conceived ſuch a Being; or if they contented themſelves only, as *Epicurus* did, with the meer Matter of Atoms, which were before the Formation of the World. What a Difficulty followed upon this to believe that Chance, and the Concourſe of Atoms, could produce that Harmony and beautiful Order, which we ſee in the World? Beſides, the Followers and Diſciples of *Ariſtotle* propoſed a Queſtion which was unanſwerable, without being enlightened by Revelation; they demanded, for Example, in the Formation of Things from Atoms, which was made firſt, the Egg or the Bird? for there can be no Egg without a Bird, nor no Bird without an Egg. Thus they maintained, that there muſt have been a ſort of Circle in the Seeds, and that Eggs and Birds had always been begot and produced alternately, the one after the other, without their particular Species ever having either Origin or Beginning.

To all theſe Reaſons I ſhall add one more. According to Father *Mallebranche*, when there are two Opinions before us, which have neither of them any evident Marks of Truth, we ought to chuſe that which is the moſt plain, and the leaſt loaded with Difficulties. Now, nothing was more plain than *Ariſtotle*'s Syſtem. He demanded only one ſingle Article to be granted him by other Philoſophers; neither was that an eſſential one, ſeeing they were all agreed about the Eternity of Matter. But in the other Syſtems there were Difficulties without Number, the chief of which I have mentioned; and if Religion did not determine and fix our Belief, the Opinion of *Ariſtotle* would appear much more eaſy and clear of Difficulties than that which we have from Revelation. The Eternity of the World being once ſuppoſed, all Difficulties vaniſh, and every Thing is produced

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naturally and neceſſarily. We are then no longer aſtoniſhed at the Order of the Univerſe, the Regularity of the Seaſons, and the Productions of Nature. Theſe are Conſequences of the Eternity of the World. That which has been from all Eternity muſt abſolutely have been ſo. Thus, if Order has ſubſiſted eternally *à parte ante*, it muſt continue eternally *à parte poſt*. I own it is a great Difficulty at the firſt View to admit of an eternal Matter, but the Difficulties on the other Side of the Queſtion are ſtill greater.

If it be no eaſy Thing to conceive the Eternity of Matter, we ſhall find it as difficult to form the Idea of an eternal and ſpiritual Being. There are two Obſtacles in our way at the firſt, *viz.* Spirituality, of which I have but a very indeterminate Notion, and the Eternity of the ſame Being. If I proceed further, I get into a Labyrinth, from whence I can find no way out. It is impoſſible for me to comprehend how a ſpiritual Being can create Matter; if I go on ſtill further, I am only the more confuſed. If God created Man, and he proceeded from a Principle of ſovereign Goodneſs, how came he to be bad? Can ſupreme Goodneſs produce a wicked Creature? Can the moſt holy Being produce a ſinful one? All theſe Doubts, and many others, offer themſelves to my Mind; and to reſolve them, I have no other Aſſiſtance than to think that my Underſtanding, being confined within very narrow Bounds, I, who am a finite Creature, ought not take upon me to judge of the Operations of an infinite Being, of whom I have only ſo much Knowledge as he is pleaſed to beſtow upon me, and in whoſe Sight all human Light and Knowledge appears to be meer Darkneſs and Ignorance *.

SECT.

* *Perdam ſapientiam ſapientium, & prudentiam prudentium reprobabo.* Iſa. cap. 1. ver. 9.

SECT. III. *An Examination of the different Syſtems of thoſe who have held the World to be eternal.*

THE *Greek* Philoſophers were prejudiced by the *Egyptians* in their Opinion of the Eternity of the World; and perhaps the *Egyptians* had been prejudiced by other People, of whom we have no Knowledge. This is what we cannot clear up; for it is in *Egypt* that we diſcover the firſt Traces of Philoſophy. The Prieſts were thoſe who applied themſelves the moſt to the Study thereof; but all the *Egyptians* in general believed and admitted two primitive eternal Deities, the Sun and the Moon, which governed the World. They thought that Spirit and Fire appertained to the Sun; Dryneſs and Moiſture to the Moon; and Air to them both; and that all Bodies, in the whole Univerſe, were formed by theſe two Planets. Spirit, Fire, Dryneſs, Moiſture, and the Air, were only Parts of theſe Bodies, as the Head, the Feet, and the Hands are Members of a human Body *.

Tho' this Syſtem did not ſuppoſe the World to be wholly eternal, yet it was very much like *Ariſtotle's*,

* Διὸ καὶ τὸ μὲν ἅπαν σῶμα τῆς τῶν ὅλων φύσεως ἐξ ἡλίου καὶ σελήνης ἀπαρτίζεσθαι τὰ δὲ τούτων μέρη πέντε τὰ προειρημένα τό τε πνεῦμα καὶ τὸ πῦρ καὶ τὸ ξηρὸν ἔτι δὲ τὰ ὑγρὸν καὶ τὸ τελευταῖον τὸ ἀερῶδες, ὥσπερ ἐν ἀνθρώπου κεφαλὴν χεῖρας καὶ πόδης καὶ τἄλλα μέρη καταριθμεῖν τὸν αὐτὸν τρόπον τὸ σῶμα τοῦ κόσμου συγκεῖσθαι πᾶν ἐκ τῶν προειρημένων.

Ideoque totum Naturæ univerſæ corpus ſole & luna conſummeri; cujus partes jam indicatæ, ſpiritus, ignis, ſiccitas, humor, & aeria tandem natura, e quibus, ut in homine, caput, manus, pedes, & alias partes numeramus, eodem modo corpus mundo conſiſtat. Diodorus Siculus, Bibliothecæ, Lib. I. cap. II.

ſtotle's, by the Suppoſition of the Eternity of the Sun and Moon. It was far leſs abſurd than that which made Chance the Cauſe of the Order and Regularity of the Univerſe. Whereas the two firſt intelligent Principles which the *Egyptians* ſuppoſed made it eaſy for them to account for the Order of the Univerſe, and the Continuance thereof. They were no longer ſurpriſed at the Regularity which we obſerve in the Courſes of the Stars, and the Change of the Seaſons, ſeeing a Rule and Method have been eſtabliſhed, and were ſtill continued by intelligent and eternal Beings.

The *Romans* took their Opinion of the Eternity of the World from the *Greeks*. When they began to apply themſelves to the Study of Philoſophy, by little and little they fell in with all the different Sects, and each had its Defenders in *Rome* as well as at *Athens*. Some adopted the Notions of *Democritus*, *Empedocles*, *Diogenes*, *Heraclitus*, *Anaximander*, *Epicurus*, and *Zeno*, and believed that the World had a Beginning. Others embraced the Opinions of *Ariſtotle*, and of thoſe other Philoſophers, who followed his Syſtem, and thought that the Univerſe had always been in the ſame State, in which they then ſaw it. Diſputes were carried on with as much Vigour in *Italy* as in *Greece*; the Philoſophers made nearly the ſame Progreſs in both, and they found themſelves as much in the Dark in one Country as in the other.

SECT. IV. *The Reaſons of thoſe Philoſophers, who believed that the World had a Beginning.*

HE that conſiders ever ſo little the admirable Oeconomy of the World, the Viciſſitude of the Seaſons, the regular Courſes of the Stars, and

and all the wiſe Productions of Nature, will eaſily conceive that it muſt have had a firſt Mover, an intelligent Cauſe, which put it into ſo beautiful and exact an Order. Thus all the Philoſophers (except the *Epicureans*, who were of Opinion that Chance formed the Univerſe) have looked upon this Order and Regularity as an invincible Argument of the Eternity of the World. *There muſt have been*, ſaid they, *a wiſe Agent that ordered that all Things ſhould exiſt in ſuch a Manner, and not otherwiſe. Had it not been ſo, the Order which we now ſee could not have ſubſiſted; for ſuppoſing (which by the way is impoſſible) that Order and Regularity might be produced by Chance, that Order and Regularity could not ſubſiſt long. It is a Species of Madneſs to think ſo. Now, if there be a firſt Being that formed the Univerſe with ſo much Harmony, then the Univerſe is not eternal, becauſe the firſt Being to which it owes its Order, was prior to it. And it would be a monſtrous Abſurdity to ſay, that the Work is as ancient as the Workman. For if a Thing be made by any Agent, that Agent muſt be before the Thing.*

However ſtrong this Manner of Reaſoning might be, the *Epicureans* could not adopt it; but they grounded their Opinions upon the Obſervations of natural Things. *The conſtituent Parts of the Univerſe*, ſaid they, *are ſubject to Corruption; thus the whole Univerſe muſt alſo be ſubject to Corruption; becauſe the whole always follows the Nature of its Parts. We ſee*, continued theſe Philoſophers, *that Time deſtroys, changes, and overthrows the moſt ſtrong Buildings. Stones decay and moulder into Duſt. The Air devours the moſt hard Rocks, Mountains fall Piece by Piece, and lie ſcattered upon the Plains* *. *The Rage of Fire, and furious Blaſts*

* Denique non lapides quoque vinci cernis ab ævo ?
Non altas turres ruere & putreſcere ſaxa ?
Non delubra Deum Simulachraque feſſa fatiſci ?

Nec

in the Air, break down and carry all Bodies one after another. And perhaps one Day the whole Univerſe, by the Violence of ſome enormous Shock, will tumble into Ruins; and the Atoms of which it is formed, will ſeparate one from another, and fly away, and ſport themſelves as heretofore, in the immenſe Space of a boundleſs Vacuity *.

The *Epicureans* took from the Aſſemblage of firſt Principles, or the primitive Parts of Matter a new Argument. They pretended, that the Atoms which formed the World by a fortuitous Concourſe, being in a continual and violent Motion, muſt in proceſs of Time occaſion it's Deſtruction by the Efforts which they make to diſengage themſelves, and get at Liberty. They add moreover, that every thing that had a Beginning is ſubject to Diſſolution. Thus the World, which had a Beginning, muſt alſo have an End. Theſe two laſt Reaſons have not the ſame Weight that the former have; they are only founded upon *Epicurean* Principles, of which indeed they are a neceſſary Conſequence. But as *Ariſtotle*'s Followers do not allow the Truth of theſe Principles, the Arguments which are drawn from thence have no Force, and are reckoned only what we call *a begging the Queſtion.*

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Nec ſanctum numen fati protollere fines
Poſſe, neque adverſus naturæ fœdære niti?
Denique non monumenta virum dilapſa videmus?
Non ruere avulſos ſilices a montibus altis,
Nec validas ævi vires preferre patique?
Lucret. Lib. V. Verſ. 307, & ſeq.

* Ne volucrum ritu flammarum mœnia mundi
Diffugiant ſubito magnum per inane ſoluta;
Et ne cætera conſimili ratione ſequantur;
Neve ruant cœli tonitralia Templa ſuperne,
Terraque ſe pedibus raptim ſubducat, & omnes
Inter permiſtas terræ, cœlique ruinas
Corpora ſolventes abeant per inane profundum,
Temporis ut puncto nihil exſtet reliquiarum,
Deſertum præter ſpatium, & primordia cæca.
Lucret. Lib. I. Verſ. 1095, & ſeq.

If you aſk me, Madam, which Opinion I ſhould have thought moſt probable, if I had lived at the Time when *Athens* was in its flouriſhing State; I may tell you, that perhaps I ſhould have had the ſame Opinion that *Manilius* had, who taking it for granted, that the Eternity and Creation of the World were equally above the Reach of human Capacities, was poſitive that People would always be in doubt, and diſpute the Verity of thoſe two oppoſite Notions:

Semper erit Genus in pugna, dubiumque manebit,
Quod latet, & tantum ſupra eſt hominemque Deumque.

However, I think I ſhould rather have had a ſecret Inclination and Biaſs to believe, that the World was eternal. I am perſuaded I could eaſily have found out Anſwers to the Objections that could have been raiſed againſt me. I would have maintained againſt the *Stoicks*, that it was neither ſurpriſing nor abſurd to believe that Matter had been co-eternal with God, directed by him; and beſides, that it received from him no other Order nor Form, but what it has actually now. My Reaſons would have made my Opinion as probable as theirs; for in maintaining that God had exiſted eternally with Matter, I would alſo have maintained, that God from all Eternity had directed it's Motions. Is it not true, I would have aſked them, that God cannot be circumſcribed by Time? They could not have denied me that Principle, nor that by which I had already proved, that when this ſovereign Almighty Being wills any thing, the Effect follows his Will in a Moment. Now, let us ſuppoſe that God, who has been from all Eternity, willed that the World

ſhould have its Order and Arrangement from all Eternity *, the Effect always following his Will, the World muſt have been from all Eternity. My Opponents might anſwer, that a Thing cannot paſs out of Non entity into Being, without having a Beginning; and therefore, as the World had a Beginning, there muſt neceſſarily have been a Time when it was not. They might add, that God cannot change the Eſſence of Things, and that Creation was making the Thing created paſs from Non-entity into Being. I could have objected to theſe Arguments the narrow Bounds of human Underſtanding, which being finite, could not

* The Queſtion of the Poſſibility of its Eternity has been ſupported by ſeveral great Philoſophers, and among others by St. *Thomas*, and by *Durand*. The following are the principal Reaſons, which theſe Philoſophers bring to ſupport their Opinion, and which are the ſame, as thoſe already mentioned, in the Body of this Work; but a little more at large, and ranged according to the Rules of Argumentation. Eſt autem quæſtio nimis gravis propter placita diverſa inſignium Doctorum, & propter rationes validas ex utraque parte, & propter rei ipſius magnitudinem. Imprimis eſt argumentum primum, quo probatur mundum potuiſſe ab æterno eſſe. Deus ab æterno fuit, jam omnipotens, ſicut cum produxit mundum; ergo ab æterno potuit producere mundum. Conſequentia certiſſima eſt, & antecedens veriſſimum. Et hoc argumentum eſt præcipuum pro hac ſententia.

Secundo. Deus ab æterno cognovit mundum, & voluit; ergo potuit mundum producere. Probatur conſequentia: Quia tantæ facilitatis eſt ipſi mundum producere, quantæ cognoſcere & velle, imo ſola cognitione & voluntate producit res has.

Tertio. Si ab æterno non potuiſſet mundum producere, ſequitur quod debuit expectare per æternitatem, ut mundum poſſet producere. Æternitas autem major eſt quocunque tempore, & ſic expectaret per multum temporis; quod abſurdum eſt & impoſſibile.

Quarto. Si Mundus non potuiſſet ab æterno eſſe, ex eo foret, quia non poſſunt eſſe in unico inſtanti ſimul cauſa & affectus, producens & productum. Sed hoc falſum eſt, ut colligitur ex his ſenſibilibus. Sic enim ſol ab æterno eſſet, & ſi pes; ſimiliter veſtigium. At lumen, & veſtigium effectus ſunt efficienter ſolis & pedis; ponit ergo cum cauſa æterna effectus coæternus eſſe.

Hujus ſententiæ eſt S. Th. Theologorum primus 1. p. 9. 46. Art. 2. & Gregor. II. Sen. d. 2, 9, 3. Franciſc. Toleti, &c. Commentaria &c. com, in Lib. VIII. Phyſic. Ariſt. cap. 2. quæſt. 2. fol. 214. Col. 1.

not comprehend the Operations of an infinite Being, nor the Extent of his Power; and they could never have proved to me, that God having existed from all Eternity, could not will and make a thing from all Eternity *.

* *Gassendi* has well explained the Opinions of the ancient Philosophers concerning the Co-eternity of the World with God. He shews that those who believed that God was the Author of the Universe, as *Pythagoras*, *Plato*, *&c.* thought however, that the World never had a Beginning, and that it had existed from all Eternity, by the Will of him who had created it from all Eternity, having been himself without Beginning. They thought, as well as the modern Philosophers, who maintained the Possibility of the Creation of the World from all Eternity, that though a Cause cannot be said to be the first with respect to Time, it ought however to be looked upon as such, with respect to it's own Nature. The World was therefore a Consequence, and a Dependant upon God, as Heat is upon the Sun; for the Sun is the Author and the Cause of Heat; though Heat was always co-existent with it. The following Quotation is inserted for the Sake of those who understand *Latin*. 'Nam Thales quidem Milesius causam apud Laertium dicens, cur mundus pulcherrimus sit, 'ποίημα γὰρ inquit τοῦ Θεοῦ, opificium enim est Dei. De Anaxagora res est celebris, quatenus mens illa idem est cum Deo. De 'Pythagora & Platone vel unus Timæus testatur, cujus ore, cum 'Pythagoricus esset, opinionem propriam sic Plato expressit, ut 'passim declaret esse Deum parentem ac opificem universi: Et 'esse quidem potuit tam Pythagoræ, quam Platonis sententia, 'quæ est superius ex illorum interpretibus insinuata, ut scilicet 'existimarint mundum esse genitum οὐκ κατὰ χρόνον, ἀλλὰ κατὰ 'ἐπίνοιαν, sed cogitatione, quasi tametsi non cœperit, cogitatione 'tamen assumatur præexitisse materiam e qua formatus fuerit. 'Enimvero eam esse putarunt mundi a Deo dependentiam, ut 'Deus mundo inexistens, habendus esset genitor mundi, quod 'causa foret materiæ & distinctionis, & ornatus omnis. Videlicet 'idem censuerunt, quod plerique jam doctorem admittunt, dum 'tuentur potuisse mundum creari a Deo ab æterno, ac Deum futurum fuisse causam, ob dependentiam mundi ab ipso; eo modo 'quo si ponamus solem cum luce, aut pedem cum vestigio fuisse ab 'æterno, poterit semper & sol lucis, & pes vestigii causa censeri. Admittunt quippe posse effectum esse causæ suæ cœvum, & sufficere ut cum causa non sit prior tempore, sit saltem prior natura τὴν ὑστ[illegible] quam vocem habet Photinus quoque; aut ratione τῷ λογῷ quæ vox Timæi Locri est, loco illius κατα vel πρὸς ἐπίνοιαν cogitatione, quam observare apud Stobæum, & Sextum Empiricum licet. Utcumque sit, tam philosophi illi, quam omnes eorum sectatores & interpretes Deum Mundi causam dixerunt. De Stoicis

I ſhould have had leſs Trouble in confuting the Arguments of the *Epicureans*. I might have denied that the World is corruptible, tho' they thought they ſaw Corruption in ſome of the conſtituent Parts thereof. This Corruption ought rather to be called Regeneration, becauſe it is only a Change that we ſee in Matter. It is neither loſt, nor ſpoiled, nor corrupted by the different Forms which it takes. And perhaps one of the principal Cauſes of it's Strength and Vigour is owing to that ſeeming Deſtruction, which, by ſubtilizing it, gives it more Liberty to produce new Wonders. And tho' it be objected, that we don't ſee Mountains riſe, but that on the contrary we ſee them leſſened every Day by the falling away of great Stones, and conſequently that there is Reaſon to fear that all hilly Parts becoming level, the Water will overflow the Earth and deſtroy it, which could not be if the World were eternal; for an eternal Cauſe is incapable of an End. Now, we can eaſily prove to thoſe who hold this Opinion, that the Earth gains in one Place what it ſeems to loſe in another. Subterraneous Fires often throwing up Mountains of Earth, and enormous Rocks, caſt them into the Plains, and there by little and little form ſucceſſively Eminences, which make up thoſe which are loſt in another Part of the Globe. In our Time an Iſland was founded in the *Archipelago*, which ſprung up out of the Bottom of the Waters *. The Sea, ſince *Julius Cæſar's* Time, is retired above three Miles on the Coaſt of *Frejus* in *Provence*. *Herodotus* ſays, that in the Reign of *Menes*, the firſt King of *Egypt*, all that Country was

cis res eſt perſpecta; & vel ipſa Balbi adverſus Velleium, Epicurumve oratio ſatis demonſtrat quid ſenſerint. Gaſſendi Opera, Sect. 1. Phyſ. Lib. I. cap. 2. Vide etiam Animad. 2. in Philoſop. Epicurii Syntagma, p. 115. Edit. in quarto.

* See an Account of that Iſland called *Santorini*.

was a Moraſs, except about *Thebes*; that none of the Land appeared then which we ſee there now beyond the Lake called *Meris*, from whence it is actually ſeven Days Journey to the Sea. *I believe*, ſays that Hiſtorian, *all that they told me of* Egypt, *obſerving particularly, that there is no Land contiguous to it, that is like it; that they find Shells upon the Mountains; that a Salt Water ſprings out of the Ground that even eats away the Pyramids. That a Mountain above* Memphis *is made up of Sand: If we may credit this Account of the* Ionians, *we might prove thereby, that anciently there was no* Egypt; *and that the* Egyptians *had no Country of their Name; for* Delta, *as they themſelves allow, and as I myſelf have obſerved, is a Land that the River has given them, and which has been, as I may ſay, created within this little while* *.

We may then ſuppoſe, and that with a great deal of Appearance of Truth, that thoſe Heaps of Earth and Mud, which are caſt up by the perpetual Flow of Rivers, only place the Soil in one Place, which is loſt in others; as it happened formerly in *Holland*, when above fourſcore Villages were ſuddenly overwhelmed with Water. Theſe Changes are made inſenſibly and alternatively in the Courſe of a great many Ages; ſo that what is Earth now † may have been Sea heretofore, and what is Sea may become Earth ‡. But theſe Revolutions being formed by Degrees, and, as I may

 ſay,

* *Herodotus*'s Hiſtory Lib. II. Monſieur *d'Argens* made uſe of *du Ryer*'s Tranſlation.

† *Vidi ego quod fuerat quondam ſolidiſſima Tellus*
Eſſe fretum, vidi factas ex æquore Terras.
Ovid. Metam. Lib. XV.

‡ Vidi ego quod fuerat quondam ſolidiſſima tellus,
Eſſe fretum: vidi factas ex æquore terras,
Et procul a pelago conchæ jacuere marinæ,
Et vetus inventa eſt in montibus anchora ſummis.
Ovid. Metam. Lib. XV. Ver. 262, & ſeq.

ſay, imperceptibly, the Order of Things is neither interrupted nor overthrown; and Matter corrupts only to change it's Form, and take a new Modification; even as a Square of Wax, being made into a Circle, loſes nothing by the Change of it's Figure. And as for the violent Motion that is attributed to Atoms, which being deſirous to be ſet at Liberty, will one day reduce the World to Duſt, as ſoon as we deny that Chance made the Univerſe, this pretended Agitation of the firſt Particles of Matter will ceaſe of itſelf, and have no more Force.

SECT. V. *An Examination of the Syſtem of the Soul of the World.*

SOME Philoſphers have held a third Opinion, different from the two former, concerning the World. They believed it to be eternal, as the Peripatetics did, and in this Point they ſided with them againſt the *Epicureans*; but they did not believe that an intelligent and omnipotent Being governed and directed it. They ſaid, that there is a certain Power diffuſed through the Univerſe, which vivifies and connects the Parts thereof; that the World was one whole Thing, as a Plant or an Animal; ſo that the Sun, Moon, Earth, Stars, and other celeſtial Orbs; in ſhort, all Bodies of Matter compoſe one whole animated living Subſtance, as the different Parts of an Animal connected together make that Animal. *Tully*, ſpeaking of the Philoſophers who held this Opinion, quotes *Strato*, and explains the Properties attributed to Matter by them. *Strato*, ſays he, *the Diſciple of* Theophraſtus (he who was called *Phyſicus*, or the Natural Philoſopher) *maintained that all the Power of the Deity*

Deity reſided in Matter, to which he granted all the Faculties that are proper for Generation and Preſervation; but he deprived this Power which vivified Matter, of Reaſon and Underſtanding *. *Virgil* often mentions this Opinion of the Soul of the World in his Writings †.

This Syſtem had many Partiſans amongſt the *Romans*; there have been ſome in all Ages ‡. And

* Nec audiendus ejus *(Theophraſti)* auditor Strato, is qui Phyſicus appellatur, qui omnem vim divinam in natura ſitam eſſe cenſet, quæ cauſas, gignendi, augendi, minuendi habeat, ſed careat omni ſenſu & figura. Cicero de Natura Deorum, Lib. I.

† Eſſe apibus partem divinæ mentis, & hauſtus.
Æthereos dixêre; Deum namque ire per omnes
Terraſque tractuſque Maris Cœlumque profundum.
Hinc pecudes, armenta, viros, genus omne ferarum,
Quem ſibi tenues naſcentem arceſſere vitas.
Virg. Georg. Lib. IV. Verſ. 220, & ſeq.

From theſe Remarks Philoſophers incline,
To think that Bees have ſomewhat of divine;
That God's diffuſed through th' Univerſe they ſay,
Through heavenly Regions, through the Land and Sea;
From God, Mankind, Beaſts tame and wild, receive
Their vital Breath, by him alone they live.

The ſame Syſtem is repeated in the *Æneid.*

Principio cœlum ac terras, campoſque liquentes,
Lucentemque globum lunæ, titaniaque aſtra
Spiritus intus alit; totamque infuſa per artus
Mens agitat molem, & magno ſe corpore miſcet.
Inde hominum pecudumque genus, vitæque volantum,
Et quæ marmoreo fert monſtra ſub æquore pontus.
Virgil Æneid. Lib. VI. Verſ. 725. & ſeq.

Know firſt, that Heaven and Earth's compacted Frame,
And flowing Waters, and the ſtarry Flame,
And both the radiant Lights, one common Soul,
Inſpires, and feeds, and animates the Whole.
This active Mind infuſed through all the Space,
Unites and mingles with the mighty Maſs.
Hence Men and Beaſts the Breath of Life obtain;
And Birds of Air, and Monſters of the Main.

‡ Alexander Epicureus dixit Deum eſſe materialem, vel non eſſe extra ipſum, & omnia eſſentialiter eſſe Deum, vel formas accidentia imaginata, & non habere veram entitatem, &c.
Albertus in I. *Phyſ. Tract.* II.

even lately *Spinoſa* has renewed it, and ſet in its full Light. He maintained this Opinion as far as ſuch an erroneous Opinion, and which has ſo many abſurd Conſequences, could be maintained *. He ſuppoſes, that there is but one Subſtance in the Univerſe, which he calls God. All particular Beings, the Extenſion of Bodies, the Sun, Plants, Men, their Imaginations and Ideas are only Modifications of God †; or of this Subſtance which he calls God. When it is objected to *Spinoſa*, that there are two Sorts of Subſtances, one uncreated, and the other cre-

* Præter Deum nulla dari, neque concipi poteſt ſubſtantia.

DEMONSTRATIO.

Cum Deus ſit ens abſolute infinitum, de quo nullum attributum, quod eſſentiam ſubſtantiæ exprimit, negari poteſt (per definit. 6.) iſque neceſſario exiſtet (per propoſit. 2.) ſi aliqua ſubſtantia præter Deum daretur, ea explicare deberet per aliquod attributum Dei, ſicque duæ ſubſtantiæ ejuſdem attributi exiſterent, quod (per prop. 5.) eſt abſurdum; adeoque nulla ſubſtantia extra Deum dari poteſt, & conſequenter etiam concipi. Nam ſi poſſet concipi, deberet neceſſario concipi ut exiſtens: atqui hoc (per primam partem hujus demonſtrationis) eſt abſurdum; ergo extra Deum nulla dari, neque concipi poteſt ſubſtantia. B. D. Spinoſ. Opera poſthuma Eth. ordine geometrico demonſtrata, &c. p. 12.

† Non dubito quin omnibus, qui de rebus confuſe judicant, nec res per primas ſuas cauſas noſcere conſueverunt, difficile ſit demonſtrationem 7. propoſit. concipere, nimirum quia non diſtinguunt inter modificationes ſubſtantiarum & ipſas ſubſtantias, neque ſciunt quomodo res producuntur. Unde fit ut principium, quod res naturales habere vident, ſubſtantiis attingant; qui enim veras rerum cauſas ignorant, omnia confundunt, & ſine ulla mentis repugnantia tam arbores, quam homines fingunt, & homines tam ex lapidibus, quam ex ſemine formari, & quaſcunque formas in alias quaſcunque mutari imaginantur. Sic etiam qui naturam divinam cum humana confundunt, facile Deo affectus humanos tribuunt, præſertim quamdiu etiam ignorant quomodo affectus in mente producuntur. Si autem homines ad naturam ſubſtantiæ attenderent, minime de veritate 7. propoſitionis dubitarent; imo hæc propoſitio omnibus axioma eſſet, & inter notiones communes numeraretur. Nam ne ſubſtantiam intelligerent id quod in ſe eſt & per ſe concipitur, hoc eſt, id cujus cognitio non indiget cognitione alterius rei; per modificationes autem id quod in alio eſt, & quarum conceptus a conceptu rei in qua ſunt, formatur, Id. ibid. Schol. 2. Propoſit. V.

created as our Souls and Matter; and that Self-exiſtence, which is a Term made uſe of in the defining of Subſtance, ſignifies only not to depend upon any Subject inherently, but to be as the Souls of Men, as Matter, as Angels, *&c.* he anſwers *, that which deſerves the Name of Subſtance muſt exiſt, independent of all Cauſes, eternally and neceſſarily.

Before I ſhew you the Abſurdities of this Syſtem, you will permit me, Madam, juſt to mention the Reaſons that induced *Spinoſa* to maintain an Opinion that abounds with ſo many Difficulties. Two Things led him into Error (1.) Man, whom he ſaw unhappy; and (2.) this Propoſition, that inceſſantly dazzles our Underſtandings, that nothing can be made out of nothing. The Miſeries to which Mankind are ſubject †, in a particular Manner ſhocked his Reaſon. He could not imagine,

* PROPOSITIO XV.

Quicquid eſt in Deo eſt, & nihil ſine Deo eſſe, neque concipi poteſt.

DEMONSTRATIO.

Præter Deum nulla datur, neque concipi poteſt ſubſtantia (per Prop. XIV.) hoc eſt (per defin. 3.) res, quæ in ſe eſt & per ſe concipitur. Modi autem (per defin. 5.) ſine ſubſtantia nec eſſe, & per ipſam ſolum concipi poſſunt: atque præter ſubſtantias & modos nihil datur (per axiom. 1.) ergo nihil ſine Deo eſſe, neque concipi poteſt. Id. ibid. p. 12.

† The Atheiſts, in all Ages, have looked upon the Evils wherewith Mortals are overwhelmed, as a ſtrong Objection, and not to be got over. Is it for Men, as *Cicero* makes *Velleius* ſay, that the Gods have created the World? If ſo, for what ſort of Men have they made it? For the Wiſe? then this great Production would have few People to enjoy it. Or, was it made for Fools? What Reaſon could oblige the Gods to intereſt themſelves for ſuch kind of People? In ſhort, was it true that this had been the Deſign of the Gods, what Good would reſult to Mankind therefrom, ſince their Lives are ſo full of Miſeries?

An hæc, ut fere dicitis, inquit, hominum cauſa a Deo conſtituta ſunt? Sapientum ne? Propter paucos ergo tanta eſt facta rerum molitio. An Stultorum? At primum cauſa non fuit quod de improbis bene moretur. Deinde, quod eſt aſſequutus, cum omnes

gine, that a Being infinitely wiſe, good and perfect could create Beings to make them miſerable. Now, he was fully convinced, that all Men, or at leaſt the Majority of them, are in ſuch a Condition, that they have juſt Reaſon to complain of it. And to be ſenſible of the Truth of the Fact, we need only take a View of the Miſeries and Misfortunes that fill the four Quarters of the World *. We ſee Men in all Places afflicted with Diſeaſes and Diſappointments, and obliged to undergo cruel Uſage from others. There are Kings in *Africa* and *Aſia*, who buy and ſell their Subjects, as private Perſons buy and ſell Sheep. We have ſeen ſome in the moſt flouriſhing Kingdoms and Empires of *Europe*, who have drank the Blood of their Sub-

omnes ſtulti ſint ſine dubio miſerrimi; maxime quod ſtulti ſunt? Miſerius enim ſtultitia quid poſſumus dicere?

Cicer. de Nat. Deor. Lib. I.

Lactantius has given us very nearly the ſame kind of Reaſoning as the *Epicureans*, who are ſo apt to blame the Conduct of the Gods, thoſe Gods, who paſs for the Fathers of Mankind, and have treated their Children ſo hardly; thoſe who ought, according to the Laws of Juſtice, and the Rules of Decency, to advance them as near their own happy State as they poſſibly could; a good Father being always careful to promote the Happineſs of his Family.

Quid enim Deo, inquit, cultus hominis confert beato, & nulla re indigenti? vel, ſi tantum honoris homini habuit, ut ipſius cauſa mundum fabricaret, ut inſtrueret eum ſapientia, ut domum viventium faceret, eumque diligeret tanquam filium, cur mortalem, fragilemque conſtituit? Cur omnibus malis, quem diligebat, objicit? cum oporteret & beatum eſſe hominem, tanquam conjunctum & proximum Deo, & perpetuum, ſicut eſt ipſe, ad quem colendum & contemplandum figuratus eſt. Lact. Lib. VII.

* They hold, that we are under the Direction of a divine Providence, notwithſtanding all our Unhappineſs and Miſery. Now, if the Gods ſo changeable, had a Mind to perplex, afflict, torment and harraſs us, they could not put us into a worſe Condition than what we are in already. Neither can the Life of Men be worſe or more miſerable than it is; ſo that if human Nature had a Tongue and Voice, it would ſay as *Hercules* did:

I'm ſo laden with Evils, ſo weak and ſo poor,
It's in vain to oppreſs me, I can bear no more.

Plutarch de Repug. Stoic.

Subjects, and bathed themſelves in their Tears. Do but reflect on the many Cruelties commited by the *Nero's*, *Caligula's*, and ſuch like Monſters. But without having Recourſe to the Evils that attend Men from without, what a Train has he within him? Acute Diſtempers, Diſcontent, Hunger, Thirſt, and Poverty? *Spinoſa* thought it was impoſſible that a Creature ſo miſerable could be the Work of a Being of all poſſible Goodneſs. *If Man*, ſaid this Philoſopher, *proceeded from a Principle of infinite Goodneſs, can he be bad? How can infinite Goodneſs produce an unhappy Creature? Can perfect Holineſs produce a ſinful Creature?* Some perhaps may anſwer, that God made Man happy, but that becoming wicked he deſerved to be puniſhed, and that this Puniſhment proceeds from a Principle of ſovereign Goodneſs, of which Juſtice is an Attribute, and as much of his Eſſence as his Goodneſs. But this Argument does not appear convincing. For if Man proceeded from a Principle of Goodneſs, he muſt have been created, not only without any actual Evil, but even without any Inclination to Evil. If it be objected, that he had ſimply the Power to determine himſelf to Evil, and that complying therewith, he only is guilty of the Sin and moral Evil that is introduced into the World, this will mend the matter but very little. For God foreſaw that Man would Sin, and make an ill uſe of his Free-Will, ſeeing we cannot deny but that every Thing is known to and preſent with God. Now, if God foreſaw the Fall of Man, he ought to have prevented it, becauſe a Principle of abſolute Goodneſs is not capable of making his Creatures unhappy, for that is contrary to the Nature of infinite Goodneſs. And though it were poſſible, that God did not foreſee the Fall of a Sinner, he might

might at leaſt think ſuch a Thing might happen, and for that very reaſon he ought to have prevented ſuch a Conſequence; for the Goodneſs of a Being altogether perfect would not be infinite, if we could imagine any Goodneſs greater than his. It is not therefore becoming this infinitely perfect Being to beſtow upon Men a Free-will, which he is certain they will make a fatal Uſe of. It belongs only to a miſchievous and wicked Being to give ſuch Things to Creatures as will ſurely be deſtructive to them. If a General ſhould diſtribute to all his Soldiers Swords, which would preſerve all thoſe from Death, who knew how to make uſe of them in a certain manner, and that he told this Secret only to ſome few, and let all the reſt periſh; would there not be reaſon to exclaim againſt his Injuſtice, and tax him with Cruelty? It is in vain to ſay, that we, who are finite Creatures, cannot have any Idea of the Juſtice of an infinite Being. It is true, we can only have an imperfect Idea of it; however, that which we have of Juſtice is ſo far true as it approaches to that of the Juſtice of God; for a Thing is good or bad, only ſo far as it approaches more or leſs to Perfection. Now my Reaſon and my natural Light, which cannot deceive me, make me ſenſible that a Man cannot be juſtly puniſhed for an involuntary Crime; nor can Creatures be created to be miſerable, when it may be prevented by a meer Act of the Will. Thus miſerable Man could not proceed from a Being of infinite Goodneſs.

The *Chineſe* Atheiſts found their Opinions on theſe laſt Objections, and they are likewiſe generally made uſe of, by all thoſe, who are ſo blind, and ſo unfortunate as to deny the Exiſtence of a God. The *Chineſe* Atheiſts, *ſays a Miſſionary*, are

are not more tractable with relation to Providence, than with regard to the Creation. When we teach them that God, who created the Univerſe out of nothing, governs them by general Laws, worthy of his infinite Wiſdom, and to which all Creatures conform with a wonderful Regularity, they ſay, that theſe are high ſounding Words to which they can affix no Idea, and which do not at all enlighten their Underſtanding.

As for what we call Laws, anſwer they, we underſtand an Order eſtabliſhed by a Legiſlature, who has the Power to enjoin them, to Creatures capable of executing his Laws, and conſequently capable of knowing and underſtanding them. Then may it be ſaid without any manifeſt Abſurdity, that a Fœtus, that a Plant, that Beaſts have a perfect Knowledge of theſe Laws, and that they conform regularly thereto, by Virtue of this Knowledge? But if they are ignorant of them, how can they put them in Execution? Does not good Senſe dictate to us, that in order to conform ourſelves to a Law, we muſt know it and comprehend it, and the Knowledge and Perception of a Law, cannot be had, but by the Means of Reaſon and Underſtanding? God, add they, has eſtabliſhed general Laws, ſo far it is right; but for whom are they made? for Beings capable of knowing and underſtanding them; or for Beings uncapable of Underſtanding and Knowledge?

If you ſay that God has eſtabliſhed theſe Laws, to be executed by Beings capable of knowing them, it follows that Animals, Plants, and in general all Bodies which act conformable to theſe Univerſal Laws, have a Knowledge of them, and conſequently that they are endued with Underſtanding, which is abſurd.

If

If you ſay that God has eſtabliſhed theſe Laws, in order to be put in Execution by Beings incapable of knowing them, and deſtitute of Underſtanding, they will hiſs at you, and will aſk, how a Being can execute a Plan of which he has no Idea, and of which you own that he can have no Knowledge, becauſe he is void of Reaſon and Underſtanding? In a word, they inſiſt, whatever Side you take, if you ſuppoſe that there are general Laws, which regulate and govern all Parts of the World, you muſt neceſſarily own, that Plants, Animals, and all other Bodies, have a perfect Knowledge of theſe Laws, or elſe that they put them in Execution without knowing them; both which Aſſertions are equally abſurd: for we can have no Idea, by which we can comprehend, how a Being deſtitute of Underſtanding can have any Knowledge of Laws, eſtabliſhed by an intelligent Being, or how any Creature can execute the ſame Laws, with the greateſt Regularity, without knowing them.

Theſe, Madam, are the principal Reaſons that led *Spinoſa* into Error. Not being able to reconcile the Miſeries of a Creature with the Perfections of the Creator, he fell into Atheiſm, and formed his monſtrous Syſtem concerning the Soul of the World, which he new modelled, though in the main it was the ſame with the old one. It is the uſual Unhappineſs of thoſe, who would ſearch too far into the Myſteries that God hides from us, to run themſelves into a Labyrinth, where they are loſt for ever *. It is Folly or Madneſs to endeavour to find out what is above our

* As for the philoſophical Opinions concerning Vice and Virtue, it is a Thing that wants not to be enlarged upon, and wherein we find many Notions, which it is better to conceal, than communicate to weak Minds.

Montagne's Eſſays, Lib. II. p. 189.

our Capacities. *It is the ſureſt and wiſeſt way,* ſays an illuſtrious ancient Author, who had only the Light of Reaſon for his Guide, *to believe the Works of the Deity, rather than pry into them*.*

SECT. VI. *A Confutation of the Soul of the World, and of* Spinoſa's *Syſtem.*

IT is a very eaſy matter to ſap the Foundations of *Spinoſa*'s Syſtem. If it be above our Capacity on one hand, to reſolve the Doubts that led him into Error, the Abſurdities of the Opinion of the Soul of the World, on the other hand, are viſible to the weakeſt Underſtandings; and I can hardly conceive how *Spinoſa*, who really had a great Genius, could not be ſenſible he was led into ſtrange Labyrinths. He admitted but of one Subſtance only in the Univerſe, which he called God. Now it is impoſſible for this to be; for every thing that is extended by Conſequence has Parts; and every thing that has Parts is compounded; what a monſtrous Chaos would follow from hence by making God a Compoſition of ten thouſand different Parts! To excuſe this Abſurdity, *Spinoſa* could not ſay, that Extenſion in general is diſtinct from the Subſtance of God; for if he ſhould ſay ſo, he would own that this Subſtance in itſelf is not extended. It could then have never acquired three Dimenſions but by creating them, ſince it is plain that Extenſion cannot proceed from a Subject not extended but by Creation. Now *Spinoſa* did not believe, that any thing could be made out of nothing. The divine Subſtance being then not diſtinct from Extenſion, it becomes liable to be

* *Sanctiùs eſt ac reverentiùs de actis Deorum credere quam ſcire.* Tacit. *de Moribus German.*

be divided into a thouſand Pieces. Nothing can be ſuppoſed more blind and abſurd than to make God an extended Being; becauſe it not only deſtroys his Unity, but reduces him to the moſt mean Condition of Nature by making him material, as Matter is the Seat of all Corruptions and Changes.

The more we examine *Spinoſa*'s Syſtem, the more we find it abound with Abſurdities. All particular Beings, ſays he, Bodily Extenſion, the Sun, Plants, Men, their Imaginations and Ideas, are all Modifications of that ſingle Subſtance, which he calls God. He does not obſerve, that the ſame Modifications will of Conſequence infer a Neceſſity of diverſe Subſtances.

You have ſeen, Madam, in the Diſſertation upon Logic, that a Thing that is modified is a Subject, or a Subſtance determined by its Attribute. Now as Modifications are Beings, which cannot exiſt without the Subſtance which they modify, Subſtance muſt neceſſarily be, wherever there are Modifications; nay, it muſt even be multiplied in proportion as different Modifications are multiplied; ſo that wherever there are five or ſix Modifications, there are alſo five or ſix Subſtances. The Proof of this Truth is very plainly perceived, by conſidering that it is impoſſible for a loving Subſtance to be at the ſame time a hating Subſtance, or that a Circle ſhould be a Triangle; for Hatred is at the utmoſt Diſtance from Love. By enforcing this Argument, one may prove not only the Neceſſity of diverſe different Subſtances, but alſo demonſtrate, that if it be true that Men are Modifications of this one Subſtance, which he calls God, that abſolutely perfect Being would be perpetually contrary to himſelf. Is it poſſible to believe, that the ſame Subſtance wills and

and nills, loves and hates, is virtuous and vicious at the ſame time? Such an Hypotheſis unites two Notions as oppoſite one to another, as a Square is to a Circle.

If we conſider, in a moral Reſpect, this Opinion of the Soul of the World, it is ſtill more contrary to Reaſon. A ſovereign Being, a perfect Being, a neceſſary Being is no longer ſtedfaſt, no longer certain. He becomes a Maſs of all Crimes. Men being only Modifications of that Subſtance, and which conſequently only acts upon itſelf, we may ſay, *One Rogue of a Deity has killed a Deity of Honour and Honeſty; they have hanged up a raſcally Deity to-day.* For theſe Modifications, according to *Spinoſa*, are nothing. It is the Subſtance only that acts.

St. *Auguſtine* has confuted this Syſtem of the Soul of the World in a lively manner. Who does not ſee, ſays this Father, the horrible Impieties, which take their Source and Riſe from this dreadful Notion? The Divine Nature is trampled upon; the Deity * is butchered upon by Piece-Meal in the Animals, which are killed for human Uſe. God becomes ſubject to all Vices. There is no part of him which is not tainted by ſome of them. Debauchery, Injuſtice and Impiety make up the Attributes of the Deity †.

One

* Quod ſi ita eſt, quis non videat quanta impietas et irreligioſitas conſequatur, ut quod calcaverit quiſque partem Dei calcet; et in omni animante occidendo pars Dei trucidetur? Nolo omnia dicere quæ poſſunt occurrere cogitantibus: dici enim ſine verecundia non poſſunt.

Auguſtin de Civitat. Dei, Lib. IV. Cap. XII.

† Non video quidem, ſi totus mundus eſt Deus, quomodo beſtias ab ejus partibus ſeparent? Sed obluctari quid opus eſt? De ipſo rationali animante, *i. e.* homine, quid infeliciùs credi poteſt, quam partem Dei vapulare cum puer vapulat? Jam verò partes Dei fieri laſcivas, iniquas, impias, atque omnino damnabiles, quis ferre poſſit, niſi qui prorſus inſaniat? Poſtremò, quid iraſcitur eis, à quibus non colitur, cum à ſuis partibus non colatur?

Auguſtin. de Civitat. Dei, Lib. IV. Cap. XIII.

One *Robert Flud*, an *Engliſhman* of acute Parts, maintained alſo this Opinion of the Soul of the World. He believed it to be compoſed of a very ſubtile and active Matter, which he called God, who being material entered into the Compoſition of the World. But he clothed his Error with ſuch a number of Diſtinctions, that one would have thought he really admitted of diverſe Cauſes and diverſe Effects. *Light and Darkneſs*, ſaid he, *are the firſt Principles of all Things. From their Mixture reſults a radical Unity, on which afterwards all Beings depend. But in the main, he makes no Diſtinction between Light and Darkneſs. He made them two Principles only by conſidering the ſame Object, ſometimes in one View and ſometimes in another. They were never really ſeparate. But our Mind may conſider them without any relation to created Beings. Thus Darkneſs itſelf and Matter is an uncreated Principle. If he ſpoke of a Time preceding the Creation, it was an imaginary Time, a meer priority in Nature**. The celebrated *Gaſſendus* has laid open the Error of this Philoſopher, and confuted it, in a convincing and triumphant manner; and that † which is remarkable therein is, that he himſelf had an Inclination to believe, that there is a certain Power diffuſed through the whole World, which, as a ſort of Soul, connects and unites the

* *Bayle*'s Continuation of *Penſées* diverſes ſur les Cometes, Tom. I. p. 349.

† Cum dico *Ante Creationem*, cave intelligas illud tempus quo nos vulgò cogitamus et aſſerimus Deum ſolum extitiſſe antequam mundum conderet. Intellige ergò potiùs ſtatum rationis ſeu abſtractionis mentalis (eo modo quo ſolent in Scholis Univerſalia fingere) quatenùs videlicet conſideramus tam lucem quam tenebras abſolutè ſecundum ſe, et ſine determinatione ad res ſingulares; à quibus tamen ſecluſâ hâc cogitationis præciſione nullo modo ſejunctæ ſunt. Lux igitùr hoc modo ſpectata increata dicitur; ac tenebræ etiam increatæ; quod hâc ratione ad nullam rem creatam, ſeu è ſe ipſis, ut partibus conſtitutam pertineant.

Gaſſendus in Exam. Phi. *Rob. Fluddi*, p. 217. Tom. 3. Operum.

the Parts thereof together. But he conſidered this Soul only as a kind of ſubtile Fire, or an extreme fine and active Matter; or, in ſhort, as a vegetative Soul, that was in Subjection to the ſupreme Being, which had created it as well as other Things. One of his moſt noted Followers tells us, he was very much biaſſed towards this Opinion; and it appears by many Paſſages in his Works, that he believed it to be very probable *.

SECT. VII. *Of the Creation of the World.*

YOU ſee, Madam, that the ancient Philoſophers, being ignorant of the Myſtery of the Creation of the Univerſe, were divided in their Sentiments in that reſpect †; and we ſhould ſtill live in

* I thought, adds *Gaſſendus*, it was no Derogation to the Faith to think that this Soul was nothing elſe but a certain Power dependant upon God. A peculiar ſort of Soul different from the ſenſitive and reaſonable, and expreſsly incapable of the ſpiritual Gifts of Grace and Beatitude. ---- Now I recite this Paſſage, to the end that when any reads or ſees, in ſeveral Places of this Work, that *Gaſſendus* inclines much to believe, that not only the Earth, the Moon, the Sun, and all the other Globes that compoſe this great Fabrick of the World, have every one a peculiar Soul, conſidering it pretty nearly as *Democritus*, *Hippocrates* and *Ariſtotle* did; but that there is hardly any thing in particular but what is animated, as precious Stones, the Loadſtone, Plants and Seeds, and which has a peculiar Soul, by the means of which it knows and can tell, as I may ſay, what is fit for it, and ſuitable for its Preſervation, and will avoid what is hurtful and tends to its Deſtruction. To be ſhort, I ſay, when we ſee in many Places of this Work, the Inclination that *Gaſſendus* ſeems to have for ſuch an Animation, by the means of which he extricates himſelf from a thouſand Difficulties, we are not to imagine that he gave into the Reveries of the ancient *Pythagoreans* and their Followers, or thoſe of *Flud*, ſeeing he refutes them all, and conſiders them as ridiculous, and unworthy of rational Philoſophers.

Bernier's Abregé de la Philoſophie de *Gaſſendi*, Tom. I. p. 117.

† *Hippocrates* ſeems to acknowledge for God, the Heat that is diffuſed through the Univerſe. This Syſtem is ſomewhat like that

in Doubts and Darkneſs, if Revelation had not ſettled our Belief. It is even contrary to Probability; and if we think that the World, and all things therein, was made out of nothing, it is Faith alone which obliges us to think ſo, and captivates our Underſtandings, which are ready to diſown thoſe Ideas, which ſeem to be falſe, when we attempt to examine them.

How then could the ancient Philoſophers agree about the Creation of the World, ſeeing, notwithſtanding the uſe of the Scriptures, the Fathers and Doctors of the Chriſtian Church are not unanimous in their Belief in that Point. Some confine themſelves to the literal Senſe of *Geneſis*, and maintain that God really employed ſix Days in the Creation of the World. Others on the contrary pretended, that it was created juſt as it is, in an inſtant, and that *Moſes* only made uſe of the Diſtinction of Days to accommodate himſelf to the Capacity of the *Jews*, who being juſt delivered from their *Egyptian* Slavery, could not have comprehended that great Myſtery, if he had not obſerved ſome ſuch Order of Time. It is eaſy, ſay they who argue thus, to ſee *Moſes*'s Deſign herein; for after he had ſeparately enumerated the Things which were created in ſix different Days, he reduces them to the Work of one Day, or rather to one Inſtant *In the Day*, ſays he, *that the Lord God made the Earth and the Heavens, and every Plant of the Field, &c.* This Opinion has been embraced and maintained by great Men, and even by ſome of the moſt illuſtrious Fathers

that of *Spinoſa*'s; for *Hippocrates* believed this Soul was nothing elſe but the *Calidum innatum*; the Heat of Nature. I think the following Paſſage proves what I ſay. *Quod Calidum vocamus* (ὁ καλέομεν θερμόν) *id mihi immortale eſſe videtur, cunctaque intelligere, videre, et audire, ſcireque omnia tum præſentia tum futura.* *Hippocrat.* de Carn. p. 249.

Fathers of the Church. Nay, ſome *Jews* have adopted it; and *Philo*, an Author of very great Reputation among them, and expert in the Knowledge of the *Jewiſh* Law, ridicules the Opinion, that admits of the Diſtinction of Days; which is only recited by *Moſes* to ſet forth the Order, that the Notion of a Creation gives us.

The Learned, who maintain that we ought to believe the Creation exactly as it is expreſſed in *Geneſis*, anſwer, that we ought not to ſeek for the Explications of Things, that are clearly explained already. That it was as eaſy for the *Jews* to think that God made the World in an Inſtant, as in ſix Days. That when any have Faith enough to believe, that ſomething may be made out of nothing, they will not want it for the Time, that ſuch a Creation requires; and that the *Jews*, having already a great Idea of God, thought nothing impoſſible to his Power, having ſeen aſtoniſhing Marks of it, in the Overthrow of *Pharoah*'s Army in the *Red Sea*.

This Diſpute being of little Conſequence in the main to Religion, I think every Man may indifferently embrace that Opinion, which upon due Enquiry ſeems moſt probable to him. However, if we examine theſe different Notions with a philoſophical Freedom, I think that of a Creation in an Inſtant, give us a more ſublime Idea of the Power of the Deity, than to ſtand in need, like a petty Artificer, of Time and Materials to bring his Work to Perfection. He needed only to ſay, *Fiat Lux, & Lux facta eſt*; *Let there be Light, and there was Light.* It is in this ready Obedience of the Thing created, that the Power of the Creator appears. Beſides, *Moſes* ſays, that the Sun was not made till the fourth Day. Now, how could there be any Diſtinction of Days before the Day

Day was made? For Days are measured by the Course of the Sun. To these Reasons, a *Cartesian* Philosopher might add the following; *If God*, says he, *made this World by Piece-meal, and at different and separate Times, that Operation of the Deity would have been repugnant to the Essence of Things, which could not be. For there would have been extended and void Spaces in Nature, till they were filled up by things that remained to be created, and which were to be placed in the void Spaces; which could not be, because Extension is in all Places where there is Matter; a perfect Void in Nature being impossible.*

But that is what I shall enquire into hereafter. And I tell you before-hand, Madam, that in all Appearance you will find no more Certainty in the Enquiries I am going to make, than in those we have already discussed.

SECT. VIII. *Of the first Principles of Things.*

ALL the Philosophers have had different Sentiments about the first Principles of Things, or the first active Parts of Matter, or if you will, concerning the Original Matter of Things. This Question has been much debated, and but little cleared up.

Heraclitus * and *Hippias* †, held that Fire was the only Principle of all natural Things; that it produced

* Καὶ τὰ ἐπὶ μέρους δὲ αὐτῷ ὧδε ἔχει τῶν δόγμα τῶν Πυρεῖναι στοιεχεῖον, καὶ πυρὸς ἀμοιβὴν· τὰ πάντα ἀρ ιώσει καὶ πυκνώσει τὰ γινόμενα.

Jam vero per partes digesta sic se habent ejus decreta. Ignem elementum esse dicit, ignisque vicissitudine, tum raritate, tum densitate constare, quæ fiunt omnia. Diog. Laert. *de Vit. clarorum Philosophorum Lib.* IX. *Segm.* 8.

† πασος, Μεταποντῖνος *Alii Crotoniatem faciunt. Jamblichus de Vita Pythagoræ, Cap.* XVIII τὸν δὲ Ἱππασον, οἰμήν. Κροτωνιάτην φασιν οἱ δὲ Μεταποντῖνον. *Ignem pro Deo coluit. Ægid. Menagii in Laert. Observationes. Seg.* LXXX. *Lib.* VIII.

produced them, and would at laſt conſume and deſtroy them.

Anaximenes ‡ and *Diogenes Apollinaris* ‖ ſaid, that every Thing was formed of the Air; which, by reaſon of its Softneſs and Flexibility, was capable of receiving any Shape.

Thales of *Miletus* pretends *, that ever thing took its Origin from Water; becauſe without Moiſture, which unites and ſupports all animated Beings, they would die and periſh.

Heſiod ſays, † that the Earth, which ſprung from the Chaos, is the Principle of all Things. He

‡ Οὗτος ἀρχὴν ἀέρα εἶπε, καὶ τὸ ἄπειρον. κινεῖσθαι δὲ τὰ ἄστρα οὐχ ὑπὲρ γῆν, ἀλλὰ περὶ γῆν.

Hic initium dixit aëra, & infinitum. Moveri ſidera, non ſupra terram, ſed circa terram. Diog. Laert. *de Vit. Philoſ. Lib.* II. *Segm.* III.

‖ Στοιχεῖον εἶναι τὸν ἀέρα κόσμους ἀπείρους καὶ κενὸν ἄπειρον. τόν τε ἀέρα, πυκνούμενον καὶ ἀραιούμενον, γεννητικὸν εἶναι τῶν κοσμων.

Elementum eſſe aërem; mundos infinitos & inane infinitum: denſumque aërem ac rareſcentem, mundos gignere. Nihil ex eo quod non ſit fieri, neque in id quod non ſit corrumpi. Id. ibid.

* Ἀρχὴν δὲ τῶν πάντων ὕδωρ ὑπεστήσατο.

Principium omnium aquam eſſe dixit. Id. ib. Lib. I. Segm. XXVII.

† Ἤτοι μὲν πρώτιστα Χάος γένετ', αὐτὰρ ἔπειτα
Γαῖ' εὐρύστερνος, πάντων ἕδος ἀσφαλὲς αἰεὶ
Ἀθανάτων, οἳ ἔχουσι κάρη νιφόεντος Ὀλύμπου.
Τάρταρά τ' ἠερόεντα μυχῷ χθονὸς εὐρυοδείης,
Ἠδ' Ἔρος, ὅς κάλλιστος ἐν ἀθανάτοισι θεοῖσι,
Λυσιμελὴς, πάντων τε θεῶν πάντων τ' ἀνθρώπων
Δάμναται ἐν στήθεσσι νόον δὲ ἐπίφρονα βυλλεῖ.
Ἐκ Χάεος δ' Ἔρεβός τε μέλαινά τε Νὺξ ἐγένοντο
Νυκτὸς δ' αὖτ' Αἰθήρ τε καὶ Ἡμέρη ἐξεγένοντο·
Οὓς τέκε κυσσαμένη, Ἐρέβει φιλότητι μιγεῖσα.
Γαῖα δέ τοι πρῶτον μὲν ἐγείνατο ἶσον ἑαυτῇ
Οὐρανὸν ἀστερόεντ', ἵνα μιν περὶ πάντα καλύπτοι;
Ὄφρ' εἴη μακάρεσσι θεοῖς ἕδος ἀσφαλὲς αἰεί.

Primo omnium quidem Chaos fuit, ac deinde
Tellus lato pectore prædita, omnium ſedes tuta ſemper
Immortalium, qui tenent juga nivoſi Olympi,
Tartaraque tenebricoſo in receſſu terræ ſpacioſæ:
Atque Amor, qui pulcherrimus inter immortales deos,

Solvens

He adds, that it is the Spouſe of Heaven, and poetically explains its Productions cauſed by celeſtial Influences.

Diogenes * the *Babylonian*, in a Work entituled *Minerva*, which is now loſt, did not reaſon one jot more accurately than *Heſiod*. He pretends to explain philoſophically, and in a manner which had no Connection with fabulous Hiſtory, the Labour of *Jupiter*, and the Birth of that Goddeſs.

Empedocles was one of the † firſt Philoſophers who diſtinguiſhed the four Elements of Fire, Air, Water, and Earth; to which he added two Faculties, or natural Powers, which he called Accord and Diſcord. Accord produced the Union and Generation of Beings; and Diſcord procured their Death and Deſtruction.

Xenophanes ‡ and *Meliſſus* ‖, believed that all things that are in the Univerſe, compoſe but one infinite

Solvens curas, & omnium deorum, omniumque hominum
Domat in pectoribus animum, & prudens conſilium.
Ex Chao vero Erebuſque, nigraque Nox editi ſunt.
Ex nocte porro Ætherque & Dies prognati ſunt:
Quos peperit ubi concepiſſet, Erebo amore mixta.
Tellus vero primum quidem genuit parem ſibi
Cœlum ſtellis ornatum, ut ipſam totam obtegat,
Utque eſſet beatis diis ſedes tuta ſemper:
Heſiodi Deorum Generat. Verſ. 118. et ſeqq.

* Quem (Chryſippum) Diogenes Babylonius conſequens in eo Libro, qui inſcribitur de Minerva, partum Jovis ortumque Virginis ad Phyſiologiam traducens, dejungit a fabula.
Cicer. de Nat. Deor. Lib. I. Chap. XV.

† Ἔδοξεν δὲ αὐτῷ. τάδε Στοιχεῖα μὲν εἶναι τέτταρα, πῦρ, ὕδωρ, γῆν, ἀέρα. Φιλίαν τε ἣ συγκρίνεται, καὶ νεῖκος ἐφ' ᾧ διακρίνεται.
Hæc autem illi viſa ſunt ac placita. Elementa eſſe quatuor: ignem, aquam, terram, acrem: amicitiamque, qua copulentur, et diſcordiam, qua diſſideant.
Diog. Laert. Lib. VIII. Segm. 76.

‡ Xenophanes ---- unum eſſe omnia, neque id eſſe mutabile, & id eſſe Deum, neque natum uſquam, & ſempiternum conglobata figura. *Cicer.* Quæſt. Acad. IV. 37.

‖ Ἔδοξεν δὲ αὐτῷ τὸ πᾶν ἄπειρον εἶναι, καὶ ἀναλλοίωτον, καὶ ἀκίνητον, καὶ ἓν ὅμοιον ἑαυτῷ, καὶ πλῆρες.
Univerſum

infinite Being, and *Parmenides* ſays *, a finite Being. Many Authors, who have ſpoken of the Syſtem of theſe two firſt Philoſophers, have thought that the one infinite Principle, which they admitted was God. But if it had been ſo, *Xenophanes* and *Meliſſus* would have eſtabliſhed no firſt Principles of Things; becauſe they had ſpoken only of the firſt Cauſe of Cauſes, as well natural, as ſupernatural.

Anaxagoras † the *Clazomenian* ſaid, that all Things were generated from ſmall Particles, or minute Corpuſcles entirely alike; which, upon their being joined and amaſſed together, produced all Things.

Archelaus ‡ the *Athenian* believed that an infinite Air was the firſt Principle which produced different Operations, according as it was thin and attenuated, or thick and condenſed.

Zareta the *Chaldean* § maintained, that Light and Darkneſs were as the Father and Mother, from whom all Things in the World were generated. This Opinion was the Root, or rather the rough

Univerſum infinitum eſſe, & immutabile, atque immobile; & unum ſibi ipſi ſimile ac plenum. Diog. Laert. *Lib.* IX. Seg. 24.

* This only finite Principal was the Sun, if we believe *Cicero*, and a learned Commentator on *Diogenes Laertius*. *Cicero* in *Lucullo*, ſays he, *ſolum ignem principium ab eo poſitum nominat.* Parmenides, *inquit ignem qui moveat terram, quæ ab eo formetur. Sed de principio efficiente tantum modo locūtus eſt.*

Ald. in Vit. Parmenid. Diog. Laert. XI. Seg. 21.

† Anaxagoras *inquit materiam infinitam, ſed eas particulas ſimiles inter ſe minutas; eas primum confuſas, poſtea in ordinem adductas mente divina.* Cicer. in Quæſt. Acad. Lib. II.

‡ *Archelaus*, the Son of *Appollodorus* the *Athenian*, ſays, that the Principle of the Univerſe was infinite Air, and the Rarefaction and Condenſation thereof, one of which is Fire and the other Water. *Plutarch* of the Opinions of the Philoſ. Lib. I. Cap. III.

§ *Zareta* the *Chaldean* imagined, that Light and Darkneſs were like the Father and Mother, from whence all Things in the World were engendered. *Du Pleix* Phyſique ou Science des choſes naturelles, Liv. II. Chap. I. p. 44.

Draught of *Robt. Flud*'s Syſtem, which I have mentioned above.

Oenopides * admitted both Fire and Air as the firſt Principle of Things; *Hippias* † of *Rhegium*, Fire and Water; and *Onomacritus* ‡ Fire, Air and Water.

Pythagoras pretended ‖, that the Principles of natural Things conſiſted in the Harmony or Fitneſs of Numbers, of which he called ten the moſt perfect; becauſe that after having counted to ten, we muſt begin again with Unity. This Notion, however unintelligible and ridiculous it was, obtained a Vogue, for ſome time, above all the reſt.

Mochus the *Phenician*, who lived in the time of the *Trojan* War, *Leucippus*, *Democritus*, *Epicurus*, *Lucretius*, and of late the famous *Gaſſendus*, were of Opinion that Atoms, which are minute Particles, indiviſible on Account of their Hardneſs, and inviſible on account of their Smallneſs, were the active Parts of Matter, and which compoſed the firſt Beings.

Plutarch, in his Account of the Opinions of the ancient Philoſophers concerning Atoms, has a Paſſage which will ſerve to illuſtrate this Subject, and will aſſiſt us, in judging of the Corrections and Additions which the modern Atomiſts have made to theſe Syſtems which they have eſpouſed. *Epicurus*, ſays he, Son of *Neocles* the *Athenian*, following the Opinion of *Democritus*, affirms, that the Principles of all Things are Atoms, that is to ſay, indiviſible Bodies, which are not perceptible but by Reaſon alone; they are ſolid without any Vacuity, uncreated, immortal, eternal, incorruptible, indiviſible, incapable of any other Form, or Alteration,

* Id. ibid. † Id. ibid. ‡ Id. ibid.

‖ Ἀρχην μὲν τῶν ἁπάντων, μονάδα. *Principium quidem omnium eſſe unitatem.* Diog. Laert. in Vit. Pythag. Segm. 28.

ration, and which are imcomprehenſible and imperceptible, but by Reaſon alone; but that they move in infinite Space, and through an infinite Vacuum, and that theſe Bodies are infinite in number, having three Qualities, Figure, Extenſion and Weight. *Democritus* allowed only two, Figure and Extenſion: But *Epicurus* added a third, which is Weight. For there is, ſays he, a Force by which theſe Bodies move, which is the Percuſſion of Weight; for otherwiſe they would not move at all: and that the Figures of theſe Bodies were comprehenſible, and not infinite, that they have neither Faſhion of a Hook, nor of a Fork, nor of a Ring, becauſe ſuch Figures as theſe are brittle: and the Atoms are ſuch, that they can neither be broke nor altered, and have certain Figures which are imperceptible by Reaſon only, and are called Atoms, which is to ſay Indiviſibles; not becauſe they are the leaſt, but becauſe they cannot be parted; inaſmuch as they are impaſſable and void of all Vacuity; therefore to ſay, that any thing is an Atom, it is to ſay that it is infrangible, impaſſable, and void of all Vacuity. And that there are ſuch Bodies as Atoms is very apparent, becauſe there are eternal Eléments of ſingle undivided Bodies.

Thoſe who are but moderately verſed in the ancient Philoſophers, will not be diſpleaſed, to ſee another Paſſage of *Plutarch*, which will give them a true Repreſentation of the Sentiments of *Pythagoras*, concerning the firſt Principle of Things.

Pythagoras, Son of *Mneſarchus*, Native of the Iſle of *Samos*, the firſt who aſſumed the Name of a Philoſopher, held that the Principles of Things were Numbers and Symetries, that is to ſay, the Agreements and Proportions that they have to each other, which are otherwiſe called Har-

mony: and ſo compoſed them of theſe two Elements which are called Geometrical. Again, he puts between theſe Principles, the firſt and the ſecond Indefinites: and refers the one of theſe Principles to the efficient and ſpecifick Cauſe, which is Underſtanding, that is to ſay God: the other to the paſſive and material Cauſe, which is the viſible World. Beſides, he reckons that ten contained the whole extent of Numbers, becauſe the *Greeks* and *Barbarians*, reckoned only to ten; for when they arrived at the Tenth, they returned back to Unity. And he ſaid farther, that the whole Power of ten conſiſts in four, that is to ſay, in the quaternary Number; and the Reaſon that he aſſigns is, that if we begin at one, and then according to the Order of Numbers, add others till you come to four, they will amount to the Number of ten; and if we go beyond the Quaternary, we ſhall alſo exceed the Tenth: that is, if you add one and two together, they make three, and three more ſix, to which if you add four, they make ten, inſomuch that the whole Number, taking them one by one, lies in ten, and its Force and Power in four. Moreover the *Pythagoreans* were want to ſwear, by the Quaternary, as the greateſt Oath, which they could poſſibly think of.

By the Holy Four I ſwear. The eternal Nature beſtowed on the human Soul.

For our Soul, ſays he, is compoſed of a Quaternary Number, for it conſiſts of Underſtanding, Knowledge, Opinion and Sentiment, from whence proceed all Arts and Sciences, and from whence we derive the Appellation of Rational. For the Underſtanding is Unity, becauſe its Knowledge and Underſtanding is derived from one. Thus every Species, and every Kind, conſiſt in Unity: and

and if we aſk any Queſtion concerning each particular Perſon, we give a general Definition of him, that he is a reaſonable Creature, that is, able to make uſe of Reaſon: or elſe, a neighing Animal. Hence we ſee why the Underſtanding is Unity, by which theſe Things are underſtood. But the Number conſiſting of two, has a right to Knowledge; for all Demonſtration and all Probation is a kind of Knowledge: and beſides every kind of Syllogizing or Ratiocination, collects and infers Concluſion which was doubtful, from certain Propoſitions acknowledged to be true, by which it eaſily demonſtrates another thing, the comprehenſion of which is Knowledge: by which it appears, that probable Knowledge belongs to the Binary Number. But Opinion, with good Reaſon, may be referred to the Ternary Number of Comprehenſion, becauſe Opinion conſiſts of ſeveral. Therefore the Ternary is a number of Multitude, as when the Poet ſays, O thrice happy *Grecians*. For this Reaſon *Pythagoras* made little Account of the Number three, the Sect of which was called the *Italian* Sect; and on this Account, *Pythagoras*, not being able to ſupport the tyrannical domineering of *Policrates*, departed from *Samos*, which was his native Country, and went and kept a School in *Italy*.

Zeno * and *Chryſippus* ſaid, that God and Matter were the real Principles of Nature: This Syſtem

* Οὐσίαν δέ φασι τῶν ὄντων απάντων τὴν πρώτην ὕλην, ὡς καὶ Χρύσιππος· ἐν τῇ πρώτῃ τῶν φυσικῶν, καὶ Ζήνων· ὕλη δέ ἐστιν ἐξ ἧς ὁτιδαποτοῦν γίνεται· καλεῖται δὲ διχῶς, οὐσία τις καὶ ὕλη, ἥτε τῶν πάντων, καὶ ἡ τῶν ἐπὶ μέρους· ἡ μὲν οὖν τῶν ὅλων, οὔτε πλείων οὔτε ἐλαττων γίνεται.

Porro rerum omnium ſubſtantiam, primam materiam dicunt, ut et Chryſippus *in primo rerum Naturalium, et* Zeno. *Eſt autem materia ex qua quidvis fit. Appellaturque duplicitèr, ſubſtantia*

et

was that of *Spinoſa*'s badly explained, and under the Covert of the engaging Expreſſion of Religion.

Cicero explains the Syſtem of the Stoics perfectly well. You may clearly ſee, by what he puts into the Mouth of *Valleius* the *Epicurean*, that *Zeno* and *Chryſippus*, and all the reſt of that Sect, believed that there was a Spirit infuſed into all Matter, which vivified it; and that in the ſame manner as the Stars, Men and other Creatures, were the ſimple Modifications of Matter, in the ſame manner as the Souls, were the Modifications of the Univerſal Soul of the Univerſal Matter. Nothing can reſemble *Spinoſiſm* more than this. *Zeno* *, ſays *Cicero*, would have it that God is Æther; as if an inſenſible Being could be God, and that the Deity can neither hear our Prayers, nor our Vows, nor our Wiſhes. In another Place *Zeno* ſays, that a kind of Intelligence, diffuſed through all Beings, has the Power of acting in a divine manner. He likewiſe affirms, that this is the ſame as the Stars, the Years, the Months, and the Seaſons; and when he explains the Theogonia of *Heſiod*, he overturns and deſtroys all the Ideas we have of the Gods. He neither acknowledges *Jupiter*, nor *Juno*, nor *Veſta*, nor any other Deity; but he pretends that they are Names which have been given to inanimate Beings to ſignify their Attributes.

What

et materia, cum univerſorum, tum ſingulorum. Et univerſorum quidem materia neque major, neque minor efficitur: ſingulorum autem, et major, et minor. Diog. Laert. Lib. VII. Segm. 150.

* *Zeno*, ---- Æthera Deum dicit, ſi intelligi poteſt nihil ſentiens Deus, qui nunquam nobis occurrit, neque in precibus, neque in optatis, neque in votis. Aliis autem libris rationem quandam, per omnem naturam rerum pertinentem, vi divina eſſe affectam putat. Idem aſtris, hoc idem tribuit, tum annis, menſibus, annorumque mutationibus. Cum vero Theogoniam *Heſiodi* interpretatur, tollit omnino præceptas inſitaſque cognitiones Deorum, neque enim Jovem, neque Veſtram, neque quemquam, qui ita appellatur, in Deorum habet numero; ſed rebus inanimis atque mutis, per quandam ſignificationem, hæc docet tributa nomini. *Cicer. de Nat. Deor. Lib.* I. *Cap.* XIV.

What *Cicero* ſays, when he ſpeaks of the Opinions of *Chryſippus* *, ſhews ſtill better the Conformity there is between the Syſtem of the *Stoics*, and that of *Spinoſa*. *Chryſippus* aſſures us, that the Deity conſiſts in Reaſon, Underſtanding, and in the Soul of all Nature. God, according to him, is the World, and the Spirit wherewith it is vivified; it is this ſuperior Part which forms the Intelligence; it is the Principle, which acts upon all other Beings, and preſerves them all; it is Deſtiny, it is Fire, it is likewiſe the other Elements, whereof it is the Principal; it is the Sun, the Moon, the Stars; in ſhort it is the whole Univerſe.

Socrates and *Plato* admitted of three Principles †, *viz.* God, Idea, and Matter. By Idea he underſtood a certain incorporeal Eſſence, which was in the Underſtanding of the Deity himſelf, by the Means of which he produced all Things. This Syſtem is very obſcure; and notwithſtanding all the Endeavours that have been made for the explaining of it fully, it has not yet been done. For what is this Idea, or divine Underſtanding, diſtinct

* Chryſippus --- ait --- vim divinam in ratione eſſe poſtam, & univerſæ naturæ animo, atque mente: ipſumque mundum Deum dicit eſſe, & ejus animi fuſionem univerſam, tum ejus ipſius principatum, qui in mente & ratione verſetur, communemque rerum naturam, univerſa atque omnia continentem, tum fatalem vim, & neceſſitatem rerum futuram; ignem præterea, & eum quem antea dixi ætheratum ea, quæ natura fluerent atque manarent, ut & aquam, & terram, & aera, ſolem, lunam, ſidera, univerſitatem rerum qua omnia continentur.

Cicer. de Nat. Deor. Lib. I. Cap. XV.

† *Socrates*, the Son of *Sophroniſcbus* the *Athenian*, and *Plato*, the Son of *Ariſton* the *Athenian*, likewiſe (for the Opinions of both agree in the main) aſſert, that there are three Principles, God, Matter, and Idea. God is the univerſal Underſtanding: Matter is the firſt Principle, ſubject to Generation and Corruption: Idea is an incorporeal Subſtance, being in the Thought and Underſtanding of God, and God the Underſtanding of the World. *Plutarch* is of the Opinion of the Philoſophers, Chap. III.

from the Deity, which *Plato* calls the viſible God*, and which is inferior to the ſupreme God? Altho' the firſt Fathers of the Church adopted the greateſt Part of this Philoſopher's Opinions concerning the eternal Being as orthodox, yet one of the moſt famous Authors of our Time as boldly maintained, that as many Deities reſult from *Plato*'s Syſtem, as from the Fictions of the Poets. He grounds his Opinion upon a Paſſage in a modern Author, who has explained and unfolded the Syſtem of Platoniſm †.

Ariſ.

* The firſt is the ſupreme God, to whom the two others owe Honour and Obedience, as he is their Father and Creator. The ſecond is the viſible God, the Miniſter of the inviſible God, and the Creator of the World. The third is called the World, or the Soul that animates the World, to which ſome give the Name of Spirit. As for the ſecond, which he alſo calls the Word, Underſtanding, or Reaſon, he conceived it of two Sorts; one which had reſided from all Eternity in God, by which God, from all Eternity, incloſed all Virtues in his Boſom, doing every Thing with Wiſdom, Goodneſs, and Power. For being infinitely happy, he has in this internal World all the Ideas and Forms of created Beings. The other Word, which is the external, or Word ſpoken is nothing elſe, according to him, but that Subſtance, which God threw out of his Boſom, or which he begot, to form the Univerſe withal. It is in this View that *Hermes Triſmegiſtus* ſaid, that the World was conſubſtantial with God.

Soverain's *Platoniſme Dévoilé*, p. 82.

This Syſtem is as confuſed and inconſiſtent as the *Talmud*. It is a little in the Strain of ſome Chapters in the *Alcoran*, which are almoſt as unintelligible; you may conſult *Bayle* in the firſt Tome of his Continuation *de ſes Penſées diverſes*, who recites this very Paſſage.

† Did you ever read any thing more monſtrous? Don't you ſee the World formed out of a Subſtance, that God threw out of his Boſom? Is not that one of the three Gods? and muſt not the Deity be thus divided into as many Gods as there are different animated Parts in the Univerſe? Have you not there all the horrible and monſtrous Things that can be ſaid of the Soul of the World? Are there not more Wars between the Gods than the Writings of the Poets ſpeak of? Are not the Gods made the Authors of all the Sins of Men? Gods, who commit and puniſh the very Crimes that they command not to be committed?

Bayle Continuation des Penſées diverſes, Tom. I. p. 346.

Ariſtotle * eſtabliſhes three firſt Principles, Matter, Form, and Privation. His Opinion was followed for a long Time, and even to our Days, with as much Submiſſion as if it had been a divine Revelation. The Man that dared to contradict the Opinion of this Philoſopher was reckoned either an *Ignoramus* or an impertinent Innovator. Nevertheleſs, a great many People of good Senſe were ſatisfied that the firſt Principles of *Ariſtotle* were as uncertain as thoſe of other Philoſophers, and perhaps more ridiculous. For, what can be more abſurd than to reckon *Nothing* amongſt the Principles of natural Productions? And what is *Privation* in the Senſe that *Ariſtotle* underſtands it but *a Thing of Nought, a Non-entity* †, *a meer Nothing? Michael Montaigne*, who by the Schoolmen's Leave, had as great a Genius as that Philo-

* *Ariſtotle*, Son of *Nicomachus*, Native of *Stagira*, aſſerts, that the firſt Principles form Matter and Privations; for Elements he makes the fourth; and for the fifth, the cœleſtial Body, which he affirms to be immutable.

Plutarch of the Opinions of the Philoſ. Ch. III. Lib. I.

† It is good to obſerve here *en paſſant*, that though the Commentators of *Conimbrus* diſtinguiſh the Privation from the Negation, they agree however, that Privation is nothing, but a Creature of Reaſon, as we may conclude from their own Words.

Secundo accipiuntur, ut diximus, ad imitationem formæ realis, expellentis aliam ſibi oppoſitam a ſubjecto; qua ratione non exiſtunt, niſi cum mente concipiuntur, & idcirco participant *naturam entis rationis*. Quod attinet ad diſcrimen inter privationem, & negationem, fatemur illud non eſſe abſolute, & ſimpliciter eſſentiale propter rationem in argumento propoſitam; ſed ſolum aliquando. Id vero ut explicetur, advertendum eſt privationem, ex eo quod dicat carentiam formæ cum aptitudine ad eam habendam, neceſſario concipi ad modum formæ in ſubjecto, cui talis potentia ineſt. At negatio, quia ſolum dicit carentiam formæ, concipi poteſt, vel in ſubjecto, vel extra, ut concipitur nihil, vel ſpatium imaginarium. Et quoniam exiſtere per ſe, & in alio, ſunt modi diverſi in ipſa eſſendi ratione, idcirco dicimus privationem & negationem habere eſſentiale diſcrimen, quando ſic opponuntur idque ſatis eſſe ut conſtituant membra diſtincta. Commentarii Collegii Conimbrenſis, Part. prima in Præfat. Porphir. Quæſt. VI. Artic. II. p. 77.

ſopher, foretold the Fate of his Principles at Time when the whole World were perſuaded of their Verity. *Before theſe Principles*, ſays he, *which* Ariſtotle *introduced, were in vogue, there were other Principles that anſwered the Ends of human Reaſon as well as his do now. What Letters Patent, or particular Privilege had they, that the Courſe of our Invention ſhould ſtop there? and that the everlaſting Poſſeſſion of our Belief ſhould belong to them? They will one Day be obliged to turn out, as others have done before them* *.

What *Montaigne* foretold is comes to paſs. *Gaſſendus* has renewed † the Syſtem of *Epicurus*'s Atoms; and *Des Cartes* has invented a ſubtile Matter. Theſe two Opinions, which ſeem very different by Reaſon of the Vacuum that *Gaſſendus* admits, and which *Des Cartes* denies, have yet ſome Reſemblance; in that they agree, that the firſt Principles of Things conſiſt of extremely minute and fine Corpuſcles. Suppoſing then that theſe minute Bodies are the active Parts of Matter, or the firſt Artificers they make uſe of, and the Principles of Things, I am going to examine whether or no they can have any Motion without a Vacuum, or whether it be not abſolutely neceſſary that there ſhould be ſuch a Thing in Nature.

SECT.

* Rurſus itaque notum eſt corporum, alia eſſe concretiones, ſeu mavis, concreta, compoſitave corpora alia ex quibus concretiones compoſitativæ corpora fiunt. Hæc autem, ſi prima ſimpliciaque ſint, prima rerum materia ſunt. Dicuntur quæ principia, & a recentioribus etiam elementa. Hujuſmodi autem principia, ſeu omnium prima, ſimplicia, impoſita corpora (ſive malis, corpuſcula) eſſe debent & inſectilia, nullave vi reſolubilia; & hac ratione immutabilia, ſive in ſeipſis mutationis omnis expertia. Nimirum, ſi futurum eſt, ut in concretionum diſſolutionibus omnia in nihilum non intereant; ſed conſiſtat perſeveretque plena quædam, ſeu vacui expers, ſolidaque adeo natura, quippe quæ talis cum fuerit, non habeat qua parte, aut quo modo fiſſuram admittat, ſicque diſſolvatur. Syntagma Philoſoph. Epicur. P. Gaſſend. Pars II. Cap. IV. p. 39. Edit. in 12.

† *Montaigne*'s Eſſays, Lib. II. p. 541.

SECT. IX. *Of Space and a Vacuum.*

THE Philoſophers, who hold the Opinion of a Vacuum, pretend alſo that there is an immaterial Space *, infinitely extended on all Sides, in Breadth, Length, and Thickneſs, as a *Tabula raſa* for all the Productions of God's Omnipotence. They make therefore two Sorts of Extenſion; one corporeal, material and impenetrable, common to all Bodies; and the other incorporeal, penetrable, which ſerves for the Reception of thoſe other Bodies, and which they therefore call local Space; and to define theſe two different Extenſions more clearly, the corporeal, for Example, conſiſts in the Length, Breadth, and Thickneſs of a contained Liquor, as in a Veſſel, or of the Air which fills it; and the incorporeal in the Extenſion which would remain from one Side to the other of the ſame Veſſel, if the Water, Air, and every other Body were taken out of it, ſo that nothing at all were left therein. Theſe are the Definitions of the two different Extenſions which they hold, who believe that there are immenſe Spaces void of all Body, beyond the Boundaries of this World. Let us ſuppoſe, ſay they, that God places a Man at the Extremity of corporeal Bodies, (which we cannot deny but that he has Power to do, if we do

* Jam univerſum ex inani & corpore conſtans infinitum eſt. Id enim quod finitum eſt extremum habet; quod vero extremum habet, id ex alio quopiam cernitur, ſeu ex intervallo extra aſſumpto cerni poteſt. At univerſum ex alio quopiam extrinſecus non cernitur; quippe cum nihil ſit intervalli, ſeu ſpatii quod intra ſe ipſum non contineat, alioquin enim univerſum ſpatium contineret, non foret, quare neque habet extremum. Quod porro non habet extremum, id neque finem habet; quod vero finem non habet id non finitum ſane, ſed infinitum eſt. Syntag. Philoſoph. Epicuri, Pet. Gaſſend. Part. II. Cap. II. p. 91. Edit. in Quarto.

do not ſuppoſe Body to be infinite, which we cannot do without annihilating the Deity, becauſe otherwiſe there would be many Infinites) and then ſuppoſe that this Man ſtretches forth his Arm. If he can do it, he will put it into a Place where there is Space without Body; and if he cannot do it, he muſt be hindered by ſomething which is beyond the Boundaries of this World and Space, which we can neither underſtand nor expreſs *. There muſt therefore be immenſe Spaces void of all Bodies, and capable of receiving thoſe which God may be pleaſed to create anew. For if corporeal Subſtance filled all imaginable Places or rather Space itſelf, then it muſt be infinite in its Extenſion; and it would be impoſſible for God to create or annihilate the leaſt Part of this Subſtance; and that powerful Being, who made the World out of nothing, would have ſo far limited his Power, that he would not be able to create or annihilate one ſingle Atom.

If to prove that there may be a Vacuum, we ſhould aſk a *Carteſian*, whether or no God, having taken away the Air, which is within the four Walls of a Chamber, and preventing any bodily Subſtance to ſucceed in the Place thereof, could hinder theſe four Walls from breaking, and make them continue in their preſent Situation? he will anſwer,

* *Præterea ſi jam finitum conſtituatur*
Omne quod eſt ſpatium, ſi quis procurat ad oras
Ultimas extremas, jaciatque volatile telum
Invalidis utrum contortum viribus ire
Quo fuerit miſſum, mavis, longeque volare,
An prohibere aliquid cenſes, obſtare que poſſe?
Alterutrum fateare enim, ſumaſque neceſſe eſt ---
Aſt ſive eſt aliquid quo prohibeat, officiatque,
Quominus quo miſſum ſi veniat, finique locet ſe,
Sive foras fertur non eſt ea fini profecto.
Hoc pacto ſequar, atque oras ubicumque locaris
Extremas, quæram quid telo denique fiat?
Fiet, uti, nunquam poſſit conſiſtere finis.
Lucret. de Rerum Natura, Lib. Verſ. 970, & ſeq.

anſwer, that it is impoſſible; and that as ſoon as there is a perfect Vacuum between theſe Walls, they will mutually touch each other. *If you ask,* ſays *Des Cartes, what would happen, if God ſhould take away all the Body or Matter that is in a Veſſel, and not permit any other Body to enter therein? I anſwer, that the Sides of the Veſſel would immediately become cloſe, and touch one another; for two Bodies muſt needs touch each other, when there is nothing between them; becauſe it would imply a Contradiction to ſay, that two Bodies are ſeparate,* i. e. *that there is a Diſtance between one and the other, and yet that this Diſtance was nothing; for Diſtance is a Property of Extenſion, which cannot ſubſiſt without ſomething be extended* *.

Before I proceed further to explain to you more perfectly the two Opinions of the *Gaſſendiſts* and the *Carteſians* concerning Space and a Vacuum, I beg you to examine, with ſome Attention, what *Des Cartes* means by Space or Extenſion. The Definition which he gives us of it, flows naturally from that which he gives us of the Eſſence of Matter.

SECT. X. *Of the Eſſence of Matter.*

WE *know, ſays* Des Cartes, *that the Nature of Matter or of Body, taken in a general Senſe, does not conſiſt in that it is a Thing that is hard, or heavy, or of ſome particular Colour, or that affects our Senſes any other Way; but only in that it is a Subſtance extended in Length, Breadth and Thickneſs* †.

You are to believe, Madam, according to this Philoſopher, that wherever there is Extenſion there muſt needs be Matter. Thus you muſt not

* Des Cartes Principes de Philoſophie, 2d Part, p. 89.

† Des Cartes Principes de Philoſophie, 2d Part, p. 73.

not be ſurpriſed when he maintains that a Veſſel cannot be rendered void of all Matter, even by the Power of God himſelf, ſeeing from one Side to the other, there will be Extenſion, and that that Extenſion is Matter. Now God cannot change the Eſſence of Beings; he cannot, for Example, make a Stick not have two Ends, or a Triangle not have three Angles. So alſo he cannot cauſe Extenſion not to be Matter, ſeeing Extenſion is the Eſſence, and the principal Quality that conſtitutes it. Thus, Madam, according to *Des Cartes*, wherever there is Extenſion there is Matter; and conſequently there can be no Space void of Matter.

Gaſſendus defines the Eſſence of Matter otherwiſe: He makes it conſiſt in Solidity: *Seeing we conceive*, ſays he, *that two Parts do not continue extended without penetrating each other, and being mixed together in one and the ſame Place, but becauſe they reſiſt one another*, i. e. *they are ſolid, hard, and heavy, I conclude therefore, that the Eſſence of Matter muſt conſiſt in its Solidity.* Now, *Gaſſendus* allows this Hardneſs and Solidity only to the firſt Principles of Matter, which compoſe the Bodies that we ſee, and which appear to us more or leſs hard, according as there are more or fewer little void Interſtices between the Atoms, or ſolid Parts of which they are compoſed.

You ſee here, Madam, that one Part of the Arguments for or againſt the Exiſtence of a Vacuum ariſes from the Definition of the Eſſence of Matter, for if Extenſion be the Eſſence of material Bodies, it is certain that there can be no Vacuum at all; ſeeing wherever there is Extenſion there will be Matter. But if, on the contrary, Impenetrability and Hardneſs, as *Gaſſendus* ſuppoſes, form the Eſſence of Bodies, it is very eaſy to conceive how there may be a Vacuum.

SECT.

SECT. XI. *The Reaſons that the* Carteſians *give for admitting only corporeal Extenſion; and for denying that there is a Vacuum in Nature.*

PHILOSOPHERS call that the Eſſence of a a Body, which makes a Body to be, or not to be. To find this Eſſence, by forming abſtract Ideas thereof, they have examined which they might reject, without ceaſing in the mean Time to have the Idea of Body. *Des Cartes* and his Followers think that they can conceive it, without any other Property than meer Extenſion, which by conſequence conſtitutes it's Eſſence. *Whatever Body we examine*, ſays this Philoſopher, *we may conceive it without any of theſe Qualities in it; and yet we clearly and diſtinctly diſcover, that it has all that is requiſite to make it a Body, provided it has Extenſion in Length, Breadth and Thickneſs; from whence it alſo follows, that to be it has no manner of Need of them, and that it's Nature conſiſts in this only, that it is a Subſtance, and that it is extended.*

If Solidity and Hardneſs, as *Gaſſendus* tells us, make the Eſſence of a Body, it may ſo happen, that Bodies may loſe their Eſſence, and conſequently that which makes them Bodies, and without which they cannot be ſuch. For we know Hardneſs only by the Means of our Feeling, and becauſe the Parts of hard Bodies reſiſt our Hands, when they come to meet them, preſs them, or hit againſt them. Now, if, when we put our Hands near any Place, and advance our Arms towards any Part, the Bodies that are in our Way retire as faſt as our Hands are extended, we perceive no Hardneſs; nevertheleſs, the Bodies which retire and give Place, do not loſe their Eſſence,

ſence, but continue to be what they were before: Their Nature therefore, or their Eſſence, does not conſiſt in Hardneſs or Solidity, which we ſometimes are ſenſible of on their Account, nor in other Properties of this Sort.

It is eaſy to be obſerved, that the ſame Extenſion that conſtitutes the Nature and Eſſence of a Body, alſo conſtitutes the Nature and Eſſence of Space, if we attentively conſider the Idea which we have of Matter. Suppoſe we take a Stone, and diveſt it of every thing that we know does not appertain to Body; Let us firſt reduce it to Powder, and deprive it of its Hardneſs, it will nevertheleſs not ceaſe to be a Body. Take away the Colour of it, and ſtill it will be a Stone; for there are tranſparent Stones that have no Colour at all. Let us deprive it of it's Heavineſs by the Force of Fire, it will ſtill be a Body. Take away it's Coldneſs or Heat, and all other Properties of that Sort, it will yet remain a Body: And after having thoroughly examined this Stone, we ſhall ſee, that the true Idea which we have of it, conſiſts in this, that we know diſtinctly that it is a Subſtance extended in Length, Breadth, and Thickneſs. Now this ſame Idea, or this ſame Knowledge, is perfectly like that which we have of Space, whether it be what we call corporeal, or that which is termed local and incorporeal *.

Thus

* Indeed the ſame Extenſion in Length, Breadth, and Thickneſs, that conſtitutes Space, conſtitutes Body; and the Difference that is between them conſiſts only in this, that we attribute to Body a particular Extenſion, which we conceive changes Place with it as often as it is moved; and that we attribute one Space ſo general and indefinite, that after having taken out of a certain Space the Body that poſſeſſed it, we do not conceive that we have taken the Extenſion of that Space alſo; by reaſon that it ſeems to us that the ſame Extenſion continues there always, while it is of the ſame Bigneſs, of the ſame Figure, and that it has not changed it's Situation with regard to the Bodies by which we determine them.

Des Cartes Principes de Philoſophie, Par. II. p. 80.

Thus Space or interior Place, and Body, which is comprized in this Space, have no Difference between them but in our Thought.

You ſee now, Madam, that it naturally follows from the Definition, that the *Carteſians* give us of the Nature of Body, that it is impoſſible there ſhould be a Vacuum. For according to them, there can be no incorporeal Space in the whole Univerſe, ſeeing the Extenſion of Space is not at all different from the Extenſion of Body *. For whenever a Thing is extended in Length, Breadth, and Thickneſs, they ſay it is a Body, a material Subſtance, ſince it is impoſſible, that a Non-entity ſhould have Extenſion. Thus they conclude, that Space, that is ſuppoſed to be a Vacuum, being extended, muſt on the contrary be material, and conſequently, that there can be no Vacuum at all. Nature, ſay they, makes nothing in vain. Now

* The Words *Space* and *Place* ſignify nothing really different with regard to a Body, which we ſay is in a Place, when we only ſpecify it's Bigneſs, Figure, and how it is ſituate between other Bodies. For to ſpecify this Situation, we muſt repreſent ſome other, which we conſider as immoveable. But in as much as thoſe Bodies which we conſider are alſo diverſe, we may ſay, that one and the ſame Thing, at the ſame Time does, and does not change it's Place. For Example, if we conſider a Man's ſitting at the Stern of a Ship, which the Wind is driving out of the Port, and obſerve nothing but this Ship, it will ſeem to us as if this Man did not change Place, becauſe we ſee that he continues always in the ſame Situation with regard to the Parts of the Ship in which he is; and if we obſerve the neighbouring Shore, it will ſeem to us as if this Man conſtantly changed Place, becauſe he recedes from one Object, and draws nearer to another. If, beſides that, we ſuppoſe that the Earth turns round upon it's own Axis, and that it makes preciſely as much Way from the Weſt to the Eaſt, as the Ship does from the Eaſt to the Weſt, it will ſeem to us again, that he who ſits at the Stern does not change Place, in as much as we determine the Place by ſome immoveable Point, which we imagine to be in the Heavens. And if we think that there cannot be found in the whole Univerſe, any Point which is really immoveable --- we ſhall conclude there is no Place for any thing in the World, which is ſettled and fixed, but what we fix and ſettle in our Thoughts.

Des Cartes Principes de Philoſophie, Part. II. p. 82.

Now, a Vacuum, if it had Exiſtence, would be of no Service, therefore it does not exiſt. Beſides, the Order and Arrangement of the Univerſe ſeems to require a perfect Chain in all its Parts, and it's Harmony would be broken, if there were a Vacuum between one Body and another *.

It ſeems abſurd, and contrary to reaſon, to admit any other Being but God to be incorporeal, eternal, immenſe, independent, incorruptible, and incapable of Diſſolution. And for a Philoſopher to be in a Capacity to admit of an incorporeal Extenſion, of which he has no Notion or Knowledge, which he does not feel, which he does not touch, which he does not ſee, he ought to prove the Exiſtence thereof by Reaſons as convincing and clear, as thoſe are by which we demonſtrate the Spirituality of God, to whom we allow all the Properties of this pretended incorporeal or local Space. And who is the Man, in ſhort, who can conceive a penetrable Extenſion, human Underſtanding having never perceived any but what is ſolid and impenetrable? Where is the Genius that is ſo acute, or rather ſo fortunate, that can comprehend how an incorporeal Extenſion can have Parts? Is there any thing in reality more repugnant to Reaſon,

* *Mais tous corps ſont liés d'un ſi ferme aſſemblage,*
Qu'il n'eſt rien vuide entre eux. C'eſt pourquoi le Breuvage
Hors du tonneau percé ne ſe peut écouler,
Qu'on nait d'un ſoupirail fait ouverture à l'air; ---
C'eſt pourquoi le ſouflet, dont la bouche eſt bouchée,
Ne peut être élargi. C'eſt pourquoi l'Eau cachée
Dans un vaſe bien clos ne ſe glace en hiver,
La Clepſydée ne peut les jardins abreuver,
S'on ferme ſa gargouille; & l'argentine ſource
Qui dans le plomb creuſé fait ſon eſclave courſe,
Forçant ſon naturel rejaillit vers les cieux;
Tant & tant à tous coups le vuide eſt odieux.

Du Bartas Poéſies, Liv. II.

However old theſe Verſes may be, they are well worth the quoting; they expreſs, in few Words, the chief Experiments on which they rely, who deny the Poſſibility of a Vacuum.

Reaſon, more abſurd than for an incorporeal Being to have Parts? And when they ſay to excuſe their Errors, that Space is a Being, *à ſa maniere*, of a peculiar Sort, that is neither Subſtance nor Accident, and conſequently may be extended, penetrable, incorporeal, they do not anſwer any of the Difficulties that are raiſed againſt this imaginary Being. For before they aſſure us, *that it is neither Subſtance nor Accident, but a Being of a peculiar Sort*, they muſt prove that it is really a Being, and certainly exiſts.

Theſe, Madam, are the chief Reaſons of the *Carteſians*, and thoſe Philoſophers, who deny the Poſſibility of a Vacuum. Tho' they be not above all Contradiction, yet they are capable of raiſing Doubts in the Minds of thoſe, who think they are the moſt confirmed in the contrary Belief. I am now going to ſhew you as diſtinctly as I poſſibly can, what the Motives are that determine the Opinion of the *Gaſſendiſts*; and then I will leave you to judge on which Side you think the Truth lies.

SECT. XII. *The Reaſon that the* Gaſſendiſts *give for holding incorporeal Spaces, and a Vacuum in the World.*

YOU have ſeen already, Madam, that *Gaſſendus* defines the Nature or Eſſence of Bodies differently from what *Des Cartes* does. He makes it conſiſt in Solidity, as being that which is the Principle in Matter, and the original Cauſe of Extenſion. We conceive, ſays that Philoſopher, that that which makes the Parts of Matter keep their Extenſion, or continue ſeparate one from another, without uniting and joining together in the ſame Place, is becauſe they mutually reſiſt one another,

another, and this Reſiſtance is occaſioned by their being hard and ſolid; from whence we infer, that we ought rather to make the Eſſence of Matter conſiſt in Solidity than in Extenſion, or, if you will, in Impenetrability, which is a neceſſary Conſequence of Solidity. It is in vain, continues he, to object that there are Bodies, which having no Solidity, as Air, Water, Fire, and a great many other material Subſtances, would ceaſe to be Bodies, if Solidity conſtituted their Eſſence, ſeeing not being ſolid, nor having any Hardneſs nor Reſiſtence, they would no longer have this Nature, or this Eſſence which makes them exiſt, or not exiſt. There is not any Body, however ſoft it may appear, but what has ſome Solidity. Beſides, the firſt and principal Parts of which all Bodies are compoſed are extremely ſolid; and thoſe Bodies which are formed thereof, ſeem only ſoft, and without Reſiſtance, by reaſon of the little Interſtices in them, and which make them eaſily give Way. If we conſider the Duſt of a Diamond, we ſhall ſee, that though it ſeems ſoft, the conſtituent Parts thereof are nevertheleſs extremely hard.

If the Eſſence of Matter conſiſts in it's Solidity, as *Gaſſendus* ſays it does; or in a certain Extenſion, ſolid and impenetrable, as ſome of his Followers pretend, a Vacuum is not only poſſible, but it is even neceſſary to realize the Eſſence of Bodies that are ſoft; and which give place without Reſiſtence by Means thereof, as I have obſerved above.

The Philoſophers, who hold incorporeal Space, pretend *, that if there were no Vacuum in the World,

* Eſſe vero etiam inane, ex eo manifeſtum fit, quod niſi in rerum natura eſſet, non haberent corpora, neque ubi eſſent, neque qua motus ſuos obirent, cum moveri ea quidem res evidens ſit. Sane

World, there could be no Motion, and that Bodies could not paſs from one Place to another. It would be introducing a Penetration of Dimenſions contrary to the Order of Nature; there muſt therefore be ſome void Space to receive Bodies in. If every Place was full, it would be impoſſible for any Bodies to encreaſe and grow larger. The Aliments, or, if you pleaſe, the Parts by the Means of which Bodies encreaſe, could not ſpread and expand themſelves by reaſon of the Obſtacles they would meet with from other Parts, which already were in Poſſeſſion of Space.

The *Carteſians* anſwer to theſe Objections, that Motion is made by the Facility that Bodies have in giving way, the more weak and ſoft to ſuch as are more hard and ſolid; as Air and Fire yield, and give way to our Bodies. Tho', ſay they, there be not any real Vacuum in Water, a Fiſh moves freely therein, becauſe, in Proportion, as it advances, it leaves a Space behind it, where the Water inſtantly follows in a Sort of circular Motion. But this Anſwer does not reſolve the Difficulty; for it is plain, if there be no Vacuum, the leaſt Particle of Water will not have Power to begin to move, to give way, or to quit it's Place. How can a Fiſh ſpring forward, or turn about, in the Middle of a Maſs, that makes an equal Reſiſtence on all Sides, replete with Bodies, which being impenetrable, can only give way by the Aſſiſtance of certain void Spaces, that can receive them * ?

Thus

Sane ſi plena fore omnia, & materia rerum veluti ſtipata, non poſſent non eſſe omnia immobilia, quia nec moveri quicquam poſſet, niſi omnia protuderet, neque jocus porro in quem quicquam protuderetur, eſſet. Syntagm. Philoſoph. Epicuri, Pars II. Cap. I. p. 27. Edit. in Quarto.

* *Nam quò ſquammigeri poterant procedere tandem*
Ni ſpatium dederint latices? concedere porrò
Quò poterant undæ, cum piſces ire nequibunt?
Aut igitur motu privandum eſt corpora quæque

Aut

Thus, the Motion of the Fiſh in the Water is ſo far from proving that there is no Vacuum, that on the contrary it evidently ſhews the Neceſſity thereof.

You here ſee, Madam, the Reaſons of Philoſophers of both Sides concerning corporeal and incorporeal Extenſion, and concerning the Interſtices, which ſome of them ſay are diffuſed throughout the whole Univerſe for the Reception of Atoms, and to procure them the Liberty of acting and moving. I think one may ſay of theſe different Opinions; what *Tully* ſaid of the different Sentiments of Philoſophers concerning the Nature and Quality of the Soul. *Harum Sententiarum quæ vera ſit Deus aliquis viderit*, i. e. *God alone knows, which of theſe Opinions is the true one.* For near theſe three thouſand Years, there have been Diſputes and Controverſies, for the Diſcovery of the Truth. The *Literati* of the two oppoſite Parties endeavour to prove it by the ſame Experiments. Each one explains them in his Favour, and ſtill we are as far as from diſcovering on which Side the Truth lies, as we were before a Word was ſaid about the Neceſſity of a Vacuum.

SECT. XIII. *The Opinion that admits a Vacuum ſeems to be moſt natural. It is probable there is one.*

YOU are too well acquainted with my Sincerity, Madam, to deſire me to decide a Queſtion ſo doubtful as this is, which concerns the Neceſſity of a *Vacuum.* I repeat, Madam, what I freely

Aut eſſe admiſſum dicendum in rebus inane,
Undè initium primum capuat res quæque movendi.
Lucret. Lib. I. Verſ. 308.

freely told you before, that I think that Queſtion impoſſible to be reſolved. But to ſatisfy, or comply with your Curioſity, I readily acknowledge, that *Gaſſendus*'s Opinion ſeems to me to be more natural, and probable, than that of his Opponents.

Des Cartes makes the Eſſence of Matter to conſiſt in Extenſion, and ſo concludes, that whereever there is Extenſion, there being alſo Matter, there cannot be any Vacuum.

I aſk, in the firſt Place, why Extenſion muſt conſtitute the Nature and Eſſence of Matter rather than Solidity, or any other eſſential Quality of Matter? For to attend to one Attribute only, abſtracted from all the reſt, it will by no means follow, that they cannot ſubſiſt without it, or that it cannot ſubſiſt without them. I may pitch upon ſome particular Attribute, which I may ſuppoſe does conſtitute the Eſſence of Matter; as for Example; if I hold a heavy Globe in my Hand, by Abſtraction I may conceive, that the Heavineſs thereof conſiſts wholly in the Center, and attend only to the Idea of this Center. Yet it would be abſurd to conclude from hence that the Nature and Eſſence of that Body conſiſted in its Gravity. Beſides, we are not acquainted with every Thing that is in Matter, or at leaſt we cannot demonſtrate we are; thus we cannot ſay preciſely what it is that conſtitutes it; and becauſe we perceive but ſeven or eight Attributes in Matter, we ought not to affirm, that it has no others, without which its Exiſtence may be as impoſſible, as without thoſe ſeven or eight which we know. If the Nature of a Thing conſiſts in thirty Attributes, that are neceſſary and inſeparable from one another, and that we take ten of them, it would be ridiculous to conclude that we have that Thing, which abſolutely requires Thirty; we ſhould have

on the contrary a Thing which requires but ten Attributes to conſtitute its Eſſence. It is juſt ſo with Matter, of which we cannot prove that we know all the Attributes; ſo that we cannot preciſely ſay, what it is that conſtitutes its Eſſence.

The greateſt Part of the Philoſophers have very different Sentiments concerning this Queſtion. Thoſe who contend, that the Nature of Matter conſiſts in Solidity, ſeem to me to have better Grounds for their Belief, that thoſe who make it conſiſt in Extenſion. *Solidity*, ſays *Locke*, *is ſo inſeparable an Idea from Body, that upon that depends its filling of Space, its Contact, Impulſe and Communication of Motion upon Impulſe. And if it be a Reaſon to prove, that Spirit is different from Body, becauſe Thinking includes not the Idea of Extenſion in it; the ſame Reaſon will be as valid, I ſuppoſe, to prove that Space is not Body, becauſe it includes not the Idea of Solidity in it; Space and Solidity being as diſtinct Ideas, as Thinking and Extenſion, and as wholly ſeparable in the Mind one from another. Body then and Extenſion, it is evident, are two diſtinct Ideas* *.

When the *Carteſians* demand how we can explain to them, and make them comprehend a meer extended Space void of all Body, we may aſk them how they explain what the Extenſion is that they ſpeak of, and they will anſwer you, as they uſually do, and ſay, that Extenſion is to have *partes extra partes*; that is to ſay, that Extenſion is Extenſion; for that is the ſame as to ſay, that the Nature of Extenſion conſiſts in having extended Parts beyond other extended Parts. May we not juſtly tax them with not having explained what was demanded of them; and that they act juſt as

* *Locke*'s Eſſay on Human Underſtanding. Book II. Chap. XIII. p. 187.

as a Phyſician would do, who being interrogated upon the Quality and Nature of Sinews, ſhould anſwer, that they are Things compoſed of Sinews. But it may be objected, that there is only Subſtance and Accident that deſerve the Name of Being. Space is neither Subſtance nor Accident; it is not therefore a Being, and conſequently does not exiſt. To this I anſwer, that it is true, that meer Space is neither Subſtance nor Accident; but it is the Place of Subſtances and Accidents, and a Being *à ſa maniere*, for it is inconceivable, that a Subſtance ſhould exiſt, and that it ſhould not exiſt in any Place. Thus Space can neither be Subſtance nor Accident, no more than Subſtance or Accident can be Space. And if any demand a more clear Explanation of it, and perſiſt in denying that it is a Being, we have a Right to anſwer them, after having ſaid, *that Space is a certain Extenſion, which cauſes a Separation between two Things, and that it is a certain Capacity proper for the Reception of Bodies*; I ſay, we have a Right to anſwer them, that there are ſome Things which can only be defined in a certain manner; becauſe when we come to that which is the moſt known, and to clear and evident Principles, we can only run in a Circle, and ſay, *that Space is a certain Capacity fit for the Reception of Bodies*; *or that a certain Capacity fit for the Reception of Bodies is Space.* In the ſame manner, when we are come to that Point, concerning the Nature of Man, as to ſay, that he is a reaſonable Creature; if any thing further be demanded of us, we can only ſay, that a *reaſonable Creature* is a *Creature that reaſons*, or that is *endowed with Reaſon* *.

* The ſimple Ideas we have are ſuch, as Experience teaches us, but if beyond that, we endeavour by Words to make them clearer in the Mind, we ſhall ſucceed no better, than if we went about

Thoſe Authors, that are ſo preſſing that we ſhould explain to them, in a clear manner, what meer Space is, and ſhew them the Properties thereof, would themſelves be very much embarraſſed, if we were to require of them to explain what that Subſtance is, which they mention every Hour, and repeat every Moment; they would very much oblige us, by informing us, whether, when they apply this Word *Subſtance* to God, to an infinite Being, to a Being purely Spiritual, they take it in the ſame Senſe, and have the ſame Idea thereof, as when they apply it to finite Spirits and to Matter? If they ſay, Yes; I deſire them to conſider, that then theſe three Beings, God, finite Spirits, and Matter, partaking of the ſame Subſtance, will be only different Modifications of the ſame Subſtance, of which they are compoſed. There you ſee *Spinoſa*'s Syſtem in its full Light; and I believe there are few People of Senſe and Learning, who have now any Inclination to embrace it. If on the contrary, they ſay, that they have three different Ideas of the Word *Subſtance*, and that that which relates to God, is not applicable to finite Spirits, nor that of finite Spirits to Matter. *Define them*, would I ſay to them, *theſe three Ideas by three different and diſtinct Words; make me underſtand clearly, what you expreſs but obſcurely by one Word, which has hardly any one clear and determinate Signification. And as ſoon as you have ſhewn me, that you have three clear and diſtinct Ideas of Subſtance, I will eaſily prove to you, that I can make out a fourth; in the mean time, you muſt permit me to believe, that Space exiſts; and that I may call*

about to clear up the Darkneſs of a Blind-Man's Mind, by Talking; and to Diſcourſe into him the Ideas of Light and Colours. I will give the Reaſon in another Place. *Locke*'s Eſſay concerning Human Underſtanding, Book II. Chap. IV. p. 184.

tall a Being à ſa maniere, *whatever it may be, neither Subſtance nor Accident.*

This, I think, is what may be ſaid in anſwer to thoſe who exclaim againſt the Explanation, which is given of pure Space. For as to the Opinion, that there cannot be a Vacuum, beſides that it implies the abſurd Neceſſity of admitting an infinite Matter, as I ſhall ſhew hereafter, it ſeems, firſt, that we cannot deny but that a Vacuum is poſſible, and ſecondly, that it is neceſſary. The Reaſons for which, Madam, I am going to give you in the two next Sections.

SECT. XIV. *That the Power of annihilating proves the Poſſibility of a Vacuum.*

IT is very difficult to find Arguments to prove the Poſſibility of a Vacuum to the Satisfaction of the *Carteſians.* One cannot even make uſe of the Power of an Almighty Being againſt them. For rather than allow, that it is poſſible that there ſhould be a Vacuum, they are obliged to ſay and maintain, that God cannot annihilate the leaſt Part, no not ſo much as an Atom of Matter. Yet I am perſuaded, there is not one of them that will deny, that God can put a Stop to all Motion in Matter, and lay all Bodies to reſt as long as he pleaſes. Now I will ſuppoſe, that in this Time of perfect Reſt, God, to puniſh a *Carteſian*, who would ſet Bounds to his Omnipotence, annihilates his Body, and reduces the Matter of which it is compoſed to nothing (which he can eaſily do, ſince it cannot be difficult for him, who made all Things out of nothing, to reduce ſo ſmall a part of all Things into nothing again) there will then be a Vacuum. It is evident that the Space, which

was occupied by the Body of the *Carteſian*, that is annihilated, cannot be filled up again, ſince all other Bodies, which ſurround it, and which might ſucceed in its Place, are fixed, immutable, and in a State of perfect Reſt. A Vacuum therefore is poſſible. We muſt either allow this, or deny that God has a Power to make Motion ceaſe, and annihilate Matter; and then Matter would be co-eternal with him. And if he has not the Power of annihilating, or reducing it to nothing, he could not have the Power of creating it out of nothing.

Let us now ſee, whether or no as valid Reaſons can be alledged for the Neceſſity of a Vacuum, as there are for its Poſſibility.

SECT. XV. *Of the Neceſſity of a Vacuum.*

A *Vacuum* ſeems to be the Conſequence of *Motion*, and it is very hard to conceive how any thing can move in a *Plenum*. The ancient Philoſophers, who held the Exiſtence of a Vacuum, laid down their Opinion in theſe general Terms. *If there be Motion, there is a Vacuum; now there is Motion, therefore there is a Vacuum.* If, in reality, throughout the whole Univerſe none of its Parts are void of Body, it muſt then be one great, immenſe cloſe-connected Maſs, in which nothing can ſtir or move. For, a Body cannot move but by taking the Place of another, which by ſtriking againſt it is driven away. *But*, ſay the *Carteſians*, *the firſt Body that is put in Motion diſplaces the ſecond, and the ſecond the third, and thus ſucceſſively they give way to one another.* I am of Opinion notwithſtanding, that maugre all theſe pretended Pulſations, the firſt Body will not ſtir at all

all, becauſe it will be reſiſted by the ſecond, and that by the third, and ſo on *ad infinitum*. It ſeems therefore altogether probable, that without the little Vacuities, which are diſperſed throughout the univerſal Maſs of Things, and which receive into their minute Cavities the moſt ſubtile Parts of Matter, which we call Atoms, Motion would be impoſſible.

Aſtronomy demonſtrates to us, that there are Stars at ſuch a vaſt Diſtance from the Earth, that to meaſure the Space between them, it would require *the Courſe of a Ball ſhot out of a Cannon for the prodigious number of Years, that are expreſſed by the twelve following Figures to compleat it, viz.* 104,166,666,636. If it be true, that the Univerſe is a vaſt cloſe-compacted Maſs, and full of Bodies, it is impoſſible to make the leaſt Motion therein, but that all its Bodies muſt feel it. But I ſay yet more, that the Reſiſtance, which they will oppoſe to this Motion muſt be immenſe, and cannot be ſurmounted but by a Force ſuperior to what we have; and yet we ſee, that far from having any Difficulty in our Motion, we can hardly feel that any Thing reſiſts us in the Air. There muſt then be empty Spaces to receive the Bodies we diſplace, and it ſeems aſtoniſhing, that when we ſtir a Finger we ſhould agitate Bodies, that are at the utmoſt Limits of the Univerſe, which muſt neceſſarily be done, if there be an entire Plenum, and no void Space at all.

Though *Des Cartes* and his Diſciples have given great Credit to the Opinion which denied a Vacuum; nevertheleſs, there are very great Mathematicians in theſe Days, who have aſſerted that it is abſolutely neceſſary. They pretend, that without the Aſſiſtance of a Vacuum, the Motion of the Cœleſtial Bodies could not take Place; this

is the Opinion of the great Sir *Iſaac Newton* *. The Syſtem which he has maintained, concerning the Harmony of the Univerſe, and the Cauſe of the different Revolutions of the Planets, a Syſtem, which agrees with the moſt inconteſtible Aſtronomical Obſervations, and which is ſupported by the Rules of the moſt ſublime Geometry, is the ſtrongeſt Argument that can be brought in favour of a Vacuum.

Thus you ſee, Madam, my Sentiments concerning the Eſſence of Matter, corporeal and incorporeal Space, and the minute Vacuities diſperſed through the whole Univerſe, for the Reception of thoſe very ſubtile and fine Particles of Matter, which are generally termed Atoms. Yet I would not have you think that I am attached more to the Hypotheſis of the *Gaſſendiſts* than that of the *Carteſians*. It is true, one ſeems to me to be more ſpecious and probable than the other; but I have been ſo free as to tell you before, that Probability is far from being Demonſtration or Evidence.

SECT. XVI. *Concerning the Atoms of the* Epicureans, *and the ſubtile Matter of the* Carteſians.

ALL the rational Philoſophers of theſe Times, as well as thoſe of former Ages, are agreed in this Point, that the firſt active Particles of Matter muſt be extremely ſubtile and fine. The *Epicureans* and *Gaſſendiſts* call theſe Particles, and firſt Artiſans of Nature, *Atoms*. They attribute various Qualities to them, which have been diſputed by other Philoſophers.

However,

* *Omnino neceſſe eſt ut ſpatia Cæleſtia omni materia ſint vacua.*

Newt. Optic. pag. 313.

However prodigiouſly ſmall thoſe Atoms are, which cannot be perceived by our Senſes, when they are not linked and amaſſed together, yet ſome of them muſt be ſmaller than others *; and by this Difference in their Magnitude the various Effects of Nature are eaſily accounted for. The number of Sorts of their different Figures cannot be expreſſed, but yet they are not infinite †; for

* Neque vero obſtare debet quod atomorum magnitudo non percipiatur ſenſibus: cum fateamur neceſſe ſit res, quæ viſum fugiant, innumeras eſſe. Licetne enim videre ventum, calorem, frigus, odorem, vocem, aut corpuſcula, quibus appellentibus hæc ſentiuntur? Licetne corpuſcula humoris, quibus veſtes in littore ſuſpenſæ reveſcunt, expanſæ fereſcunt? Licetne ea, quæ deterruntur ex annulo diutius geſtato; ex vertente cardine; ex ſulcante vomere; ex lapide, quem gutta cavat, quem incedentum greſſus deminuit? Licetne ea, quibus planta aut animal increſcit pubeſcens, tabeſcens; aliaque in genus?

Non eſt interim reputandum eſſe Atomos omnes ejuſdem magnitudinis: nam alias quidem in iis majores, aliàs minores exiſtere, rationi magis conſonum eſt; et hac re admiſſa, plurium, quæ contingunt circa paſſiones animi, circaque ipſos ſenſus, reddi cauſa poteſt.

Poſſe autem etiam infra ſenſum, magnitudinum varietatem incomprehenſibilem dari; vel ex eo poteſt intelligi, quod animalcula quædam ſint, quorum tertia pars, ſi diviſa intelligantur, viſum fugiat; et nihilominus ipſis compingendis neceſſaria ſit partium incomprehenſibiles multitudo. Quot enim, quæſo, exſtant oportet ad conficiendum inteſtinum; ad conformandum oculos; ad componendum artus; ad contexendum animam; ad conſtituendum parteis univerſe omneis, ſine quibus intelligi animal, quod vivat, quod ſentiat, quod moveatur, non poteſt? Philoſophia Epicuri Syntagma. *P. Gaſſend.* Part II. Cap. VI. p. 254. Edit. in Quarto.

† Succedit Epicuri propria, atque ideo etiam a Lucretio deducta ratio, quæ aliqua tamen diſcuſſa, confirmataque ſupponit. Unum, quicquid eſt in rerum naturæ, aut corpus eſſe, aut inane, ubi nomine corporis intelligit non modo compoſita hæc, ſenſibiliaque corpora, ſed maxime etiam corpuſcula illa longe infra ſenſum poſita, atomoſque dicta, quod ſint inſectilia, ex quibus tanquam elementis, ſeu primis principiis mutuo coadunantis majora ſta contexantur et conſtent; nomine autem inanis intelligit ſpatium corpore non oppletum. Alterum, eſſe univerſum utraque hac re, hoc eſt, tam corporum maximeque et amorum multitudine, quam inanis ſpatii magnitudine infinitum; videlicet vult atomos innumerabili figurarum varietate inter ſe diſcretas, et celeritate celerrima mobileis ferè infinito numero per inanis-

the *Gaſſendiſts* allow nothing to be infinite, but the Almighty and perfectly ſpiritual Being *. We may therefore conceive Atoms to be of a *flat*, *ſpherical*, *angular*, *regular*, *irregular* Figure, *&c.* and to be extremely ſmall; and there is no reaſon to ſuppoſe

inanis immenſitatem.---Eſt autem reſponſio in promptu, non conficere, quod contenditur, hanc rationem, quod tametſi concedatur eſſe inane infinitum, non perinde tamen dari concedatur infinitas atomos, ut quarum ſit mera et abſque ratione ſuppoſitio; cum et ſit petitio quæſiti, incurſuſque in modum diallelum, dari infinitas atomos, quoniam infiniti ſunt mundi, qui fieri ex illis debuerint, et dari infinitos mundos, quoniam ſunt atomi, ex quibus fieri debuerint, infinitæ. Quin etiam, ubi conceſſum fuerit eſſe atomos principia rerum; non ideo tamen evincetur eſſe infinitas atomos, cum eæ ſolæ eſſe poſſint ex quibus ſit factus, hic unicus, mundus. Et urgetur quidem, ſi inane admittatur magnitudine infinitum, eſſe neceſſe, ut atomi per illud vagentes infinitæ ſint, quod coire alioquin non poſſint, neque olim reipſa coiiſſent ad mundum iſtum conſtituendum; verum id quidem locum haberet, ſi ſimul admittetur aut increatas atomos eſſe, aut non a cauſa alia, quam ab ipſo caſu compactas in mundum. At vero, ut nemo eſt ſanæ mentis, qui opus tam magnum, tam varium, tam ordinatum, tam ſplendidum, tam decorum, referre poſſit ad ipſum caſum, et non ad cauſam quandam divinam, quæ et potentiſſima ſimul, et ſapientiſſima ſit, ſic nemo ſanus unquam concedat aut eas atomos, ex quibus ſit mundus, factas non eſſe ab eadem cauſa; aut non fuiſſe ſimul ab ipſa compactas conformataſque in ipſum mundum, potius quam ſibi ipſis permiſſas, ut temere diſcurrerent, et caſu potius, quam ſapientia coirent, et compingerentur.

Gaſſen. Oper. Sect. I. Phyſ. Lib. I. Cap. II.

Thoſe who uuderſtand Latin will meet with in the foregoing Quotation, the Reformation which *Gaſſendus* made in the Syſtem of *Epicurus*, and thoſe who are ignorant of it, will ſee the Subſtance of this Paſſage, in the Words of *Bernier* which follow.

* The ſecond Thing that *Lucretius* aſſerts is, that Atoms under every Form are meerly infinite in Number, that is to ſay, there is an Infinity of round ones, an Infinity of oval ones, *&c.* But as he alledges no certain certain Proof of this Infinity, and that it is otherwiſe demonſtrable, that the Maſs of this World, which comprehends all theſe Atoms, is finite; it is enough for the Natural Philoſopher, who maintains the Hypotheſis of Atoms, to admit that they have a certain Form, and that not only the Number of Forms, but even the Number of Atoms under each Form is incomprehenſible.

Bernier's Abridgm of *Gaſſend.* Philoſ. Tom. I. p. 175.

One may ſee by this Paſſage with what Diſcretion *Gaſſendus* has refined upon *Epicurus*'s Philoſophy, and brought it to the ſtricteſt Trial and Examination.

ſuppoſe them without Figure, or Form, ſeeing they have Magnitude and Extenſion.

However fine and minute the Parts, which determine the Figure of Atoms may be, they cannot be broken by the greateſt Force imaginable *. Thus, when any Body is bruiſed to Pieces, the Atoms, that compoſe that Body, are no ways injured thereby; they are only ſeparated one from another, and ſet at liberty; from whence they faſten upon other Bodies, which they augment and enlarge, being the firſt Principles of every Thing that exiſts in Nature; for an Atom cannot be divided, it is the ultimate and leaſt part of Matter, which becauſe of its Solidity and Hardneſs †, is uncapable of being divided. It is not therefore the Smallneſs of the Atoms that renders them indiviſible, but their hard and ſolid Nature; Bodies being only diviſible and ſubject to Diſſolution, becauſe they have little Vacuities in them, which, giving place to a ſuperior Force, occaſions their Diſſolution and Deſtruction.

The *Carteſians* exclaim vaſtly againſt this Definition of an Atom. *It is eaſy to diſcover*, ſay they, *that there can be no ſuch thing as Atoms, or indiviſible Parts of Matter; for however ſmall thoſe Particles may be, ſeeing they are extended, we conceive clearly, that the Side which regards the Eaſt, is not the Side which regards the Weſt, and therefore it*

* *Hæ quæ ſunt rerum primordia nulla poteſt vis*
Stringere, nam ſolido vincant ea corpore demum.
Lucret. Lib. I. ver. 486.

† Quamobrem et neceſſe eſt ut ea, quæ dicuntur principia compoſitorum corporum, ſunt naturæ ut plenæ, ſolidæ, immutabilis, ita omnino inſectilis; unde ut atomos dicere ſolemus. Dicitur nempe atomus nobis, non quod minima ſit, hoc eſt, quaſi punctum, (magnitudinem enim habet) ſed quod non poſſit divid, cum ſit patiendi incapax, et inanis expers: adeo ut qui atomum dicit, dicat id quod et plagæ ſecurum eſt, et pati nihil poteſt; quodque invſibile quidem propter exiguitatem ſit, ſed indiviſibile tamen propter ſui ſoliditatem. Philoſop. *Epicur.* Syntagma, *P. Gaſſend.* Part II. Cap. IV. p. 40. edit. in 12mo.

is diviſible; and when this firſt Diviſion is made, the remaining Sides in the divided Parts, which are towards the Eaſt, will not be the ſame with thoſe that are towards the Weſt; and thus they may be divided again. And when we conceive clearly and diſtinctly, to that a Thing may be divided, we may ſafely ſay, it is diviſible; for otherwiſe we ſhould make a falſe Judgment, and contrary to Reaſon and the Light of Nature. We may therefore be aſſured, that the leaſt Particle of Matter, ſeeing it is extended, is diviſible in its Nature.

Before I tell you my Sentiments concerning theſe different Opinions, permit me, Madam, to premiſe a few Words relating to *Des Cartes*'s *ſubtile Matter*, which, in his Syſtem, ſerves inſtead of *Atoms*. This Philoſopher ſays, that in the Beginning God divided the indefinite Maſs of the Univerſe into Squares; that he turned all theſe Squares upon their Center, that by daſhing and chafing one againſt another, they might be reduced to Powder, and formed into many round and channeled Grains; and many others which ſhould become ſo ſmall and fine, that having no determinate Figure, and being exceeding ſubtile, they might fill all the void Spaces of the groſſer Parts; and this is what is called the *ſubtile Matter*.

It is to be wiſhed, that this Philoſopher had lived in the Time of *Moſes*; he would have given him excellent Counſels; for that *Jewiſh* Prophet knew nothing of this turning round of the Squares; at leaſt, we have not one Word about it in the Book of *Geneſis*. Perhaps he might not think it proper to expoſe ſuch a philoſophic Syſtem to the *Jews*, whoſe Minds were then dull and oppreſſed by their late Servitude in *Egypt*. How could he have made them comprehend, in what manner all theſe Squares could turn round upon their Center, there being an univerſal Plenum, and Matter and Extenſion

tenſion being infinite? For theſe Squares by turning round upon their Center muſt occupy more Space than when they were at reſt. There muſt then have been a Vacuum beyond Matter, or corporeal Extenſion, to facilitate the Circumgyration; but if Matter had been infinite, and there had been an abſolute Plenum, nothing could have ſtirred. We could not ſay, that ſome Bodies gave place to others, ſeeing none of them were fluid or ſoft, but were all of the ſame Quality. The *Jews*, who had not Penetration enough to merit the Name of *Carteſians*, would have immediately concluded, that theſe Squares never turned round, or that there muſt have been an incorporeal Space for them to move in. If it had happened, that any one amongſt them had had a little more than common Reflection, he would not have failed to have ſaid, that it is impoſſible to conceive how theſe Squares by rubbing one againſt another could be broke to Pieces, and reduced to Powder; becauſe all the Bodies being equally ſolid, of the ſame Magnitude, and equal in their Motion, the Corners of theſe Squares, which received no more Impreſſion from one Side than another would be equally ſupported on all Sides, and conſequently could not have their Angles bruiſed, nor reduced to Powder. Be that as it will, *Des Cartes*'s ſubtile Matter is very much like *Epicurus*'s Atoms, excepting their Diviſibility; and he makes uſe of them to the ſame good Purpoſe, that the *Gaſſendiſts* do their hard and ſolid Particles.

Thus you ſee, Madam, the Reaſons of the *Carteſians* for the Neceſſity of the Diviſibility of the leaſt Particle of Matter; I am now going to ſet before you thoſe of the *Gaſſendiſts*, in the ſame ſuccinct manner.

SECT.

SECT. XVII. *Of the Diviſibility of Matter.*

IT ſeems abſurd, ſay the Philoſophers, who hold the infinite Diviſibility of Matter, to ſuppoſe that a Thing, that is finite, and bounded and limited on every Side, can yet have in itſelf infinite Parts. The Whole is but a Maſs of Parts, and the Parts taken together cannot be greater than the Whole. The Underſtanding is ſhocked, when we would have it believe, that the Leg of a Fly can be divided into a thouſand Million of Parts, and that each of thoſe Parts may be divided into as many thouſand Millions more; and that in the Leg of this Fly there are as many diviſible Parts, as in the whole Univerſe, ſince the Parts which are in the Leg of a Fly are infinite in number, as well as thoſe which compoſe the Univerſe; for there cannot be two ſorts of Infinites.

It ſeems abſurd to think, that in a Drop of Wine there ſhould be ſuch a ſufficient Number of Parts, as will mix with all the Water in the Sea. And yet, as abſurd as this Paradox appears, we are obliged to receive it, if we maintain the infinite Diviſibility of Matter.

Sir *Iſaac Newton* has adopted the Opinion of the Indiviſibility of Atoms, and what he ſays on this Subject, is very ſenſible and very natural. According to this ſagacious *Engliſh* Philoſopher: *In the Beginning God made Matter, in ſolid, maſſy, hard, unpenetrable, moveable Particles, of ſuch Magnitudes and Form, with ſuch other Proprieties, in ſuch a Number, in ſuch a Quantity, and in ſuch Proportion to Space, which were moſt ſuitable to the End for which they were made; and for as much, that theſe primitive Particles are ſolid, they are incomparably*

parably more hard, than thoſe porous Bodies, which are compoſed therefrom; and ſo hard, that they never wear or break, nothing being capable, according to the ordinary Courſe of Nature, of dividing into ſeveral Parts, that which was originally made one, by the Will of God himſelf. While theſe Particles continue whole and intire, they will conſtitute in all Ages, Bodies of the ſame Nature and Contexture; but if they ſhould once begin to wear, or break in Pieces, the Nature of the Things, which depend upon theſe Particles, as they were in their Original Formation, would infallibly undergo a change. Water and Earth, compoſed of the old worn out Particles, and the Fragments of theſe Particles, would not be of the ſame Nature and Contexture, as the Water and Earth, which had in the Beginning been compoſed of intire Particles. And conſequently that Nature may continue durable, the Alteration of Corporeal Beings ſhould conſiſt of nothing elſe, but the different Separations, new Diſpoſitions and Motions, of theſe permanent Particles; the Bodies compoſed thereof, being ſubject to break, not in the middle of theſe ſolid Particles, but in the Places where theſe Particles are joined together, and do not touch but in a ſmall number of Points.

Notwithſtanding theſe Reaſons, the *Carteſians* will not recede from their Opinion; they have always Recourſe to their chief Argument, which inceſſantly glares upon their Mind, *Every Thing that is extended has Parts, and may* conſequently be divided. The Philoſophers who hold the Indiviſibility of Atoms anſwer to this Objection, that an Atom is not only indiviſible by reaſon of it Smallneſs, but by being hard and ſolid by its Nature, in which there is no Void. And if I may venture to declare my Opinion, in a Caſe of ſo incomprehenſible a Nature, I confeſs, Ma-

dam, that I think there ought to be in Matter a certain Point of Minuteneſs and Smallneſs, beyond which nothing can be made leſs; be it by reaſon of the Hardneſs and Solidity, which conſtitutes the firſt Principles of Things; or becauſe that it is contrary to the Light of Nature to imagine, that a finite and limited Whole can have infinite Parts. This would be almoſt as repugnant to Reaſon, as to ſay, that a Part is greater than the Whole.

Ariſtotle, and many other Philoſophers, were very ſenſible of theſe Difficulties, but they thought to elude them by a number of uſeleſs Diſtinctions. They ſay, that the Parts are not actually infinite, but only potentially ſo; by which they do not eſtabliſh a real Infinity, but a potential Infinity, though it be actually infinite. But to what Purpoſe is this Jargon, and Heap of uſeleſs Terms? What are Parts, that are not actually infinite, but are potentially ſo? Is not this to ſay, they may be infinite? Beſides, the Parts of any certain Number, may be comprehended, or not; if they can be comprehended, they cannot be divided in *infinitum*; and if they cannot be comprehended, they are neceſſarily infinite.

Des Cartes alſo was aware of all theſe Difficulties. He had a Mind to elude them by making uſe of an Artifice, that *Chryſippus* had made uſe of long before: But he ought to have conſidered, to how many Cenſures and Reproaches this Subterfuge had expoſed that ancient Philoſopher; who, to cut the Matter ſhort, ſaid that the Parts, into which Matter, or the Parts of Matter might be divided, were neither finite nor infinite *. Is not this meer Nonſenſe to ſay, that a Thing is neither

* *Nos neque ex quibuſdam, neque ex tot vel tot, neque ex finitis, neque ex infinitis conſtare.*

ther finite nor infinite, but *indefinite?* It is much the ſame, as if I ſhould aſk a Man, whether or no the Number of Bottles in his Cellar be even or odd, and he ſhould ſay, *neither odd or even.* If he had juſt drank a couple of them, I could forgive him ſuch an Anſwer, for he muſt really be muddled in his Brain to make ſuch a nonſenſical Reply. But I am too indulgent to *Des Cartes*, (who was really one of the greateſt Genius's *Europe* ever produced) to ſuppoſe that he could think, that the Parts of Matter are neither finite nor infinite. He was ſenſible, that it is repugnant to Reaſon to imagine, that the Parts of any finite Thing can be infinite, or that there are as many Parts in the Leg of a Fly, as there are in the whole terraqueous Globe. On the other ſide, Extenſion, which he ſaid was the Eſſence of Body, hindered him from acknowledging the Hardneſs of Atoms, which being without any Vacuities, are more indiviſible by their Solidity, and Impenetrability than by their Minuteneſs. Therefore to free himſelf from this Embarraſs, between the two Extremes, he reſolved not to decide the Queſtion at all.

He was obliged to act in the ſame manner, when he ſpoke of the Bounds of the Univerſe. As he did not admit of corporeal Space, it followed from his Syſtem, that wherever there is Extenſion, there is Matter; and becauſe whatever Part we think of, we may conceive extended Space beyond it, he was forced to allow, that as Extenſion is infinite, Matter is conſequently ſo too; which laid a Foundation not only for great Errors, but alſo for Conſequences that are fatal to Religion. To get himſelf therefore out of this Scrape he had recourſe again to *Indefinity*, and maintained, that the Extenſion of the World was neither

neither finite nor infinite. I am aſtoniſhed how *Des Cartes*, who had ſo ſeverely chaſtized the Schoolmen for the Abuſe, which they made of Words, could fall into the ſame Error, and could in two very eſſential Points, eſtabliſh his Opinion upon a meer *Quodlibet*, or play upon Words. For what other Name does that Term deſerve, that defines nothing, nor conveys any Idea to the Underſtanding, excepting that of the little Certainty there is in a Philoſophy, that makes uſe of ſuch a Subterfuge?

Methinks, I now ſee, Madam, all the *Carteſians* begin to rage, and call me an impudent Blockhead; but let them uſe me with what Severity they will, I ſhall never allow, that a Philoſopher ought to play with Words; and by trifling Diſtinctions endeavour to impoſe upon the World. I could have been glad, that *Des Cartes* had frankly owned that Matter is infinite, according to his real Sentiments, and not have diſguiſed his Thoughts, by having Recourſe to this pretended *Indefinity*. I know many will think it ſtrange, that I venture to criticiſe ſo great a Man as *Des Cartes*, whom I reſpect, perhaps, more than they do themſelves. But I declare boldly, that I not only think that the *Carteſian* Syſtem is defective in many Articles, which are not eaſy to be reconciled, but alſo that it is very natural, for a Man who embraces it, to become a *Spinoſiſt*. However great his Genius was, he was but a Man, and as ſuch liable to err; though he has cleared up a great Number of Difficulties, yet he ſometimes falls into Miſtakes. This at leaſt is the Judgment that one of his moſt famous Diſciples gives us of his Works *

SECT.

* *Des Cartes* was a Man like others, and ſubject to Error and Illuſion, like the reſt of Mankind; none of his Works, not excepting his Geometry, but ſhew ſome Mark, of the Weakneſs of

SECT. XVIII. *That* Spinoſa's *material Proofs are taken from the* Carteſian *Syſtem.*

SPINOSA admitted of only one material and infinite Subſtance; he proved it to be infinite by the ſame Arguments that *Des Cartes* proves it to be indefinite. We cannot, ſaid he, ſet any Bounds to Extenſion. In whatever Point we fix our Mind, it conceives an Extenſion beyond it, which it not only imagines, but knows it muſt be as it imagines it. Extenſion therefore being infinite, Subſtance muſt be ſo too, ſeeing Subſtance is extended wherever there is Extenſion. Now, ſeeing this Subſtance is infinite, and that there cannot be two Infinites, I ought to call it God, or the efficient Cauſe of all other Beings, which are only Modes of this infinite Subſtance, which alone produces them all, and receives them again into it's Boſom, when they change their Form, or are deſtroyed.

As this Subſtance, continues *Spinoſa*, is infinite, and that conſequently and neceſſarily it muſt be God, as I have proved by the Impoſſibility of two Infinites, it muſt neceſſarily have exiſted from all Eternity. For who could create it? It would be abſurd to ſay, that a firſt Infinite created a ſecond; as two Infinites cannot ſubſiſt together, ſo we may ſafely conclude, that one could not proceed from the other. This extended Subſtance therefore muſt have exiſted from all Eternity, and have all it's Properties as Intelligence, Production, Motion, *&c.* The Opinion of the ancient Philoſophers, who made God co-eternal with this extended Subſtance, and

of a human Mind. We are not therefore to believe him upon his own Word, but to read him, as he himſelf adviſes us with Caution, and to examine if he is not deceived, and not to believe any thing that he has ſaid, but what Evidence, and the ſecret Dictates of our own Reaſon, oblige us to believe.

Mallebranche de la Recherche, Lib. III. *Ch.* IV. p. 186.

and diſtinguiſhed him therefrom as a ſeparate Being, is ridiculous and falls of itſelf, through the Impoſſibility of two Infinites, which always preſents itſelf to the Mind. And if any ſay abſolutely, that God is a Being diſtinct from extended and infinite Subſtance, they muſt make God finite, and conſequently much inferior to extended Subſtance, which being infinite in itſelf is a thouſand Times more perfect, and more worthy to be regarded as the firſt Deity.

You, ſee, Madam, what Reaſon I had to ſay, that real *Spinoſiſm* eſtabliſhed it's Notions upon many of the *Carteſian* Principles. Yet, God forbid that I ſhould charge *Des Cartes* (who was one of the greateſt Genius's in the World, and a thorough Believer in the Spirituality of God) with having any Deſign to favour Atheiſm. But I only make theſe Remarks to ſhew you that moſt dangerous Conſequences may ſometimes be drawn from Tenets, which we eſteem to be very innocent. It is with Philoſophers as it is with Lovers; ſome ground themſelves upon the leaſt Word, and others upon the leaſt Favour; yet they are all in the ſame Uncertainty of being accepted; and Philoſophy is at leaſt as jilting a Baggage as the arranteſt Coquette in Town.

SECT. XIX. *Of the Motions that Atoms have.*

SEEING, Madam, you have obliged me to ſide with *Gaſſendus* againſt *Des Cartes*, tho', to be plain with you, I am not immoveably grounded in my own Sentiments, I will explain to you ſome of the various Effects of Nature, occaſioned by the Motion of Atoms, which are hidden

den from us, and too much reſemble the Obſcurity of the general Principles of Natural Philoſophy.

Lucretius aſſures us, that Atoms are in a perpetual Motion, which they have had from all Eternity; but we can correct this Error, for we know that God put them firſt into Motion, when he created them.

The conſtant Change which is obſerved in all Things, gave Birth to the Opinion of *Lucretius* *. He ſuppoſed, and that with Reaſon, that this Change was occaſioned by the continual Separation of Atoms, which being in a perpetual Agitation, endeavoured to free themſelves one from another, and to be ſet at Liberty, in an infinite Space, which they traverſed with incredible Rapidity, till they were catched hold of again by ſome others. Thus the Augmentation of all different Bodies is only produced by a new Collection of Atoms; and the Diſſolution and Deſtruction of others by their Diſunion and Flight. The Manner in which the principal Parts of a Body, perceptible by our Senſes, come to be diſunited, may give us an Idea of the Diſunion of the firſt active Parts of Matter.

But one Difficulty ariſes from the perpetual Motion which is allowed to Atoms. For it ſeems impoſſible, that the Atoms which compoſe the

* *Nam certè non inter ſe ſtipata cohæret*
Materies, quoniam minui rem quamque videmus,
Et quaſi longinquo fluere omnia cernimus ævo;
Ex oculiſque vetuſtatem ſubducere noſtris:
Cum tamen incolumis videatur ſumma manere,
Propterea quia, quæ decedunt corpora cuique
Unde abeunt, minuunt; quo venere, augmine donant;
Illa ſeneſcere, at hæc contra floreſcere cogunt,
Nec remorantur ibi; ſic rerum ſumma novatur
Semper, & inter ſe mortales mutua vivunt.
Augeſcunt aliæ gentes, aliæ minuuntur,
In quo brevi ſpatio mutantur ſæcla animantum,
Et quaſi curſores vitai lampada tradunt.

Lucret. Lib. I. Verſ. 66, & ſeq.

the Parts of a Piece of Gold, Iron, or other very compact and hard Bodies, ſhould be in Motion, and endeavour to be diſunited. In anſwer to this it may be ſaid, that the moſt ſolid Bodies are full of little empty Interſtices, which promote this Agitation, and which we need not look upon as ſtrange, though it be not perceptible by our Senſes. Thus we ſee by Experience every Day, that a Lump of Lead, which is melted, as ſoon as it is liquified ſeems to be entirely at reſt over the Fire, tho' there be really a violent Motion therein. For as ſoon as the active Parts of the Fire, have penetrated into the Lead, and inſinuated themſelves into its Pores, they cannot get out again, but are there impriſoned by other active Parts of the Fire, of which there is a perpetual Succeſſion. It is thus they inſinuate themſelves into all its Parts, and diſunite and ſeparate the moſt minute Particles of the Lead, which not being able to get together again, while they continue in that Agitation, make the Lead reſt liquified, till the Fire be taken from under it, and the ſpirituous Particles which diſſolved it evaporate, and fly off. In all thoſe rapid Motions which are cauſed in the melting of Metals, it is difficult to perceive the leaſt Agitation. Thus we may think that it is no wonderful thing, that there ſhould be an inward Motion in the moſt compact Bodies, which may in time occaſion their Diſſolution

There are a great many light and volatile Bodies in which we perceive a perpetual Motion, as in the Spirit of Saltpetre, and that which is drawn from Quickſilver, Tin, and prepared Sublimate. All theſe light Corpuſcles have an inceſſant Motition, whenever they are ſtopped up cloſe in a Bottle.

SECT.

SECT. XX. *Of the Motion of a ſubtile Matter, and of Attraction.*

DESCARTES, in a Senſe, performs the ſame Things with a ſubtile Matter, as *Gaſſendus* with his Atoms. The firſt of theſe Philoſophers pretends that the Earth and the Heavens are made of the ſame Matter, whoſe Eſſence we only know by this Property alone, *viz.* Extenſion. *All the Properties*, ſays he, *that we perceive diſtinctly in it, may be referred to its Diviſibility, and the Mobility of the Parts of which it conſiſts, and that it may receive all the various Diſpoſitions which we obſerve in it from the Motion of theſe Parts.* You may perceive, Madam, that the only Thing in which the Matter of *Deſcartes* differs from Atoms, whether with regard to the Formation, Augmentation, and the Deſtruction of Bodies, is, that it acts by it's Suppleneſs, without the Aſſiſtance of a Vacuum, whereas an Atom cannot move without the Help thereof. All theſe different Opinion are neceſſary Conſequences of the different general Principles, which we have explained. Thus, if we once admit of a Vacuum, we muſt needs reaſon like *Gaſſendus*; but if we baniſh it, we muſt follow *Deſcartes*.

The great Sir *Iſaac Newton* was deſirous of ſhewing a new Road to his Diſciples. He believed that God had impreſſed ſomething more than Motion upon the Atoms, and that he had beſtowed upon every Particle of Matter, the Force and Virtue of mutually attracting each other. But take his own Words, by which his Opinion will appear in the beſt Light. *The Parts*, ſays he, *of all hard, homogeneous Bodies, which are in full contact, are united ſtrongly together. Some in explaining the Cauſe of Coheſion have invented crooked Atoms; but this is begging the Queſtion. Others affirm, that the Particles of Bodies ſtick together by*

the

the Aſſiſtance of Reſt; that is to ſay, by an occult Quality, or rather by a meer nothing; and others that they are joined together, by conſpiring Motions, that is, by a relative Reſt between themſelves. As for my own Opinion, I had rather conclude the Coheſion of Bodies conſiſts in the mutual Attraction of their Particles by a Force, which in immediate Contact, is extremely powerful, and which, at ſmall Diſtances, produce the chymical Operations before mentioned; and which at the very great Diſtances of the Bodies, either do not act at all, or have no ſenſible Effect.

This Virtue of mutual Attraction, which Sir *Iſaac Newton* beſtows upon Bodies, has met with great Sticklers for it; and it has likewiſe had as potent Adverſaries. They have blamed this Philoſopher for deſigning to re-eſtabliſh the occult Qualities of the Peripatetics; and they have objected, that he acted almoſt in the ſame Manner as *Ariſtotle, who* explained the Virtues of the Loadſtone, or at leaſt thought he explained them, by ſaying, that it attracted Iron, becauſe it had an attracting Virtue in itſelf. Sir *Iſaac Newton* replies to this, that the Attraction which he admitted in all the Parts of Matter, may be demonſtrated by a great Number of Experiments, and that he did not conſider the general Principle which he eſtabliſhed as a Quality, which reſulted from the ſpecifick Form of Bodies, but as a general Law of Nature, by the Things themſelves are formed. He pretends that the Truth of this Law is evident from Experiments; and it muſt be owned, that no Philoſopher ever ſupported his Opinion by ſo great a Number of Experiments, as Sir *Iſaac* has brought to eſtabliſh his. You may ſee at the Bottom of the Page ſome of his Experiments *; they will

* That which I call Attraction, may be produced by Impulſion, or by other Means to me unknown. I only employ this Word

they will ſerve to give a juſt Idea of the Manner whereby the *Newtonian* Philoſophers explain by the Word to denote in general, that Force by which Bodies reciprocally tend towards each other, whatever the Cauſe of it may be; for it is from the Phœnomena of Nature, that we are to learn what Bodies mutually attract each other, and what are the Laws and Properties of this Attraction, before we enquire after the Cauſe by which this Attraction is produced. Gravitation, Magnetiſm, and Electricity, extend to very ſenſible Diſtances; for which Reaſon they have been obſerved by every common Eye; and there may be others, that extend to ſuch ſmall Diſtances, that they have hithero eſcaped our Obſervation; and perhaps electric Attraction may extend to theſe kind of ſmall Diſtances, without being excited by Friction.

For when Salt of Tartar is diſſolved *per deliquium*, is not this Effect produced by an Attraction between the Particles o Salt of Tartar, and the Particles of Water, which float in the Air in form of a Vapour? And from whence comes it, that common Salt, Salt-petre, or Vitriol, do not diſſolve *per deliquium*, if it is not for Want of ſuch an Attraction? Again, Why does not Salt of Tartar attract more Water from the Air, but in a certain Proportion to its Quantity, if it is not, that after this Salt is ſated with Water, it has loſt its attractive Force? To what other Cauſe can we attribute it, but to this attracting Force, that Water, which is diſtilled alone by a very moderate Degree of Heat, cannot be ſeparated from Salt of Tartar, but by a very violent Heat? And is there not the like Force mutually between the Particles of Oil of Vitriol, and thoſe of Water, which makes the Oil of Vitriol draw a great Quantity of Water from the Air; and after it is ſufficiently ſated, attract no more therefrom; and when put in Diſtillation, it will not part with the Water, without a great deal of Difficulty? And when Water, and the Oil of Vitriol, are poured ſucceſſively into the ſame Veſſel, they acquire a very conſiderable Degree of Heat as they mix together? And does not the Heat prove, that the Particles of theſe Liquors are in a great Agitation? And does not this Motion or Agitation prove, that the Particles of theſe two Liquors mix together, and are incorporated with Violence, and that conſequently their Concourſe is performed with an accelerated Motion? And when Aqua Fortis, or Spirit of Vitriol, poured upon Filings of Iron, diſſolve it with an Ebullition, and a great Heat, is it not a violent Motion of the Particles of Aqua Fortis, or the Spirit of Vitriol, which produces this Heat or this Ebullition? And does not this Motion prove, that the acid Particles of the Liquor ſeize violently on the Particles of the Meral, and enter by Force into its Pores, till they have penetrated between the exterior Particles of the Metal, and the Maſs of which it is compoſed; and that ſurrounding theſe Particles, they detach them from the principal Maſs, and put them in a Condi-

the Aſſiſtance of Attraction what the *Gaſſendiſts* attribute to the Motion of Atoms.

You will doubtleſs demand what I think of this Attraction, which ſo many Perſons talk ſo much of in theſe Days. I might ſay, that this is according to Cuſtom, becauſe this Opinion has all the Graces of Novelty, and that the Learned are not leſs carried away by Cuſtom and Faſhion than the Ladies themſelves. The Philoſopher, as ingenious as learned, ſeems to be of the ſame Opinion, ſince, according to him *, Attraction, a Vacuum which were heretofore baniſhed from natural Philoſophy by *Deſcartes*, and in all Appearance baniſhed for ever, are brought back by Sir *Iſaac Newton*, armed with a Force entirely new, which they were not thought capable of, and perhaps only a little diſguiſed. As for me, if I was permitted to ſpeak my Opinion, I own that I ſhould not think it very extraordinary, that many Perſons cannot comprehend, without Difficulty, that Attractions cannot have their Principle from Impulſion, ſince we find them reign in the Vacuum, but that they muſt have a real and true Exiſtence. May it not be allowed to be looked upon as an *Ens Rationis* of the Schools? For whatever may be ſaid, it is very hard to conceive, that Bodies may be moved any otherwiſe than by two Cauſes, either by the immediate Will of God, or by the Percuſſion of any other Body. The *Carteſians* and the *Gaſſendiſts* admit but one Principle, which is very natural; which is, that God has created a certain

dition of floating ſeparately in the Liquor? And when the acid Particles, which alone may be diſtilled by a gentle Heat, cannot be ſeparated from the Particles of the Metal, but by a violent Fire, does not this prove, that there is a mutual Attraction between the Particles of the acid Liquor, and thoſe of the Metal? *Newton*'s Opticks, p. 530.

* Eloges des Academiciens, &c. par Mr. de Fontenelle, Tom. II.

certain Quantity of Motion which always ſubſiſts. We in reality perceive the Effects of this Motion; but as for general Attraction, it muſt rather be ſupported by Conjectures than Demonſtrations: For Inſtance, if a *Carteſian* is aſked, why Iron ſeems to have a Power of attaching itſelf to the Loadſtone, he will anſwer, that it is known, that an inſenſible Matter iſſues out from the Pole of the Loadſtone, which entering in at the other Pole, forms a Vortex, ſince one may ſee the Vortex traced in an Inſtance upon the Filings of Steel. This Vortex fixes the Steel to the Loadſtone, or drives the ſubtile Matter from between the Steel and the Loadſtone, at the ſame time that the Air, by its Spring, or precipitate Return, thruſts the Steel towards the Loadſtone. After having explained, by theſe plauſible Reaſons, the Junction of the Steel and the Loadſtone, the *Carteſian* concludes, that Gravity, which hurries Bodies towards a common Center, and that Fermentation, which moves them according to different Directions, have their immediate Principle in Emotion and Impulſion. When a *Newtonian* attempts to explain this Difficulty, which may be looked upon as a real Prodigy; he will ſay, that the Particles of Steel are attracted by thoſe of the Loadſtone, becauſe the attractive Force of the latter are more powerful: And when he is aſked, what this Attraction is, he will ſay, that it is a Force by which the Particles of Bodies mutually attract each other, and which, in immediate Contact, is extremely powerful, which at ſmall Diſtances produce the chymical Operations, and by the ſame Reaſon the Re-union of the Loadſtone and Iron. If we reply, and aſk a ſecond Time, from whence this Force proceeds, they will anſwer, that it is by Attraction; but how much wiſer ſhall we be by ſuch

an Anſwer? As for myſelf, I have no Faith in it; notwithſtanding there are Perſons who have the Reputation of being very learned, who have no Doubt at all concerning it. May one not aptly apply to them what Mr. *de Fontenelle* ſays *? *The conſtant Uſe of the Word Attraction, ſupported by a great Authority, and perhaps alſo by the Inclination of Sir* Iſaac Newton, *for the Thing itſelf makes the Readers familiar with an Idea, which the* Carteſians *had baniſhed, and whoſe Condemnation all other Philoſophers had ratified.* We ought at preſent to be upon our Guard, leſt we ſhould imagine it to be ſomething real, and expoſe ourſelves to the Danger of believing that we underſtand it.

You cannot imagine how many People, Madam, ought to profit by theſe laſt Words; for there is nothing ſo common now a days, as for Perſons to imagine, that they comprehend what Attraction is, as perfectly as the moſt demonſtrable Truths. It is true, that there are among the moſt celebrated Diſciples of Sir *Iſaac Newton*, Philoſophers, who have adopted the Term, and yet acknowledge they are ignorant of what it is, and in what manner it acts †. One may compare theſe Philoſophers to the Diſciples of *Pythagoras*. *Magiſter dixit, our Maſter ſaid it*, fits them perfectly well; but as for others it may be ſaid they reſemble Chymiſts, who at the ſame time, that they are almoſt famiſhed for Want of Victuals, are perſuaded that they underſtand the Secret of making Gold, and are the principal Dupes, and the principal Victims of their own Prejudice.

At

* Eloges des Academiciens, &c. par Mr. de Fontenelle, Tom. II. p. 302.

† Per vocem attractionis intelligo vim *quamcunque*, qua duo *corpora* ad ſe invicem tendunt; licet forte illud per impulſum fiat Phyſices Element. Mathem. &c. autore Jacobo s'Graveſande, Tom. I. Lib. I. Cap. V. p. 9.

At preſent the Madneſs of Attraction is more ſtrong in *Holland* and *England* than ever the imaginary Vortices of *Des Cartes* was in *France*. One may ſee Lawyers forſake the Bar to buſy themſelves in the Study of Attraction, and Divines neglect their Theological Exerciſes for it's ſake. I own, if I was in their Place, perhaps I ſhould do the ſame. However uncertain the Study of Natural Philoſophy may be, I had rather live in my Cloſet with *Des Cartes*, *Newton*, and *Gaſſendus*, that with *Cujas*, *Bartholus*, *Cocceius*, and *du Moulin*.

By the Manner of my ſpeaking to you, Madam, concerning Attraction, a Manner which many of the ſevere *Newtonians* will think indecent, and even worthy of an exemplary Puniſhment, you will doubtleſs think, that I look upon the Opinion of Sir *Iſaac Newton* as falſe; not at all, Madam; undeceive yourſelf, I only think it uncertain; and perhaps if I had wrote to any other Perſon but yourſelf, I ſhould give it the Preference to that of other Philoſophers; but I have made it a Law, not to lay down any thing for certain, when I am ſpeaking to you, which may be only placed in the Rank of Probabilities, which, however, are to be preferred to thoſe on the other ſide the Queſtion. I will anſwer for nothing, but the Certainty of evident Truths. Far from entirely rejecting the Attraction of Sir *Iſaac Newton*, I ſhall, whenever you pleaſe, convince you that I am a *Newtonian*. Only conſult, when you are at Leiſure, the eleventh Part *of the Secret Memoirs of the Republick of Letters*, wherein I ſpeak at large of the Syſtems of *Des Cartes* and Sir *Iſaac Newton*. I was under a kind of Neceſſity, if I may ſo ſpeak, which forced me to determine what ſide I ſhould favour, for the learned World are leſs complaiſant than the Ladies,

and oblige one to declare for one Side or the other; I choſe that of *Newton*, becauſe, all Things conſidered, if I did not perceive the moſt evident Proofs in his Syſtem, I at leaſt diſcovered fewer manifeſt Errors then in that of *Des Cartes*. Perhaps you will have ſo much Curioſity as to enquire after the Reaſons which determined my Choice; I am now going to give you that Satisfaction as faſt as I can.

SECT. XXI. *An Examination of the Syſtem of* Des Cartes.

I Shall begin, Madam, by diſcovering the Errors which cauſe me to reject the Syſtem of *Des Cartes*; and then I ſhall proceed to ſpeak of the Probabilities which have prevailed upon me to determine in favour of that of Sir *Iſaac Newton*.

God created, according to the Hypotheſis of *Des Cartes*, Matter indefinite and homogeneous; he then eſtabliſhed certain Laws of Motion; and by theſe primitive Laws every Body that is moved ought to proceed in a right Line. He produced a Quantity of Motion, which was to continue the ſame for ever, and to ſubſiſt throughout all Ages, without any Increaſe or Diminution. He divided Matter into equal Parts, which were cubic, upon which he impreſſed a Motion, which was equal and circular, about the Center. Now obſerve what was the Conſequence of this Motion on which the Harmony of the Univerſe depends; it is a *Carteſian* who is going to tell us, and to give us an Epitome of the entire Syſtem of his Maſter. *From this Motion*, ſays he *, *the interior of each cubic*

* Origine ancienne de la Phyſique moderne, &c. par le *P. Rognault*, Tom. I. p. 100. Edit. Amſterdam.

cubic Particle became a ſmall Globe, a little Ball, and the Angles which were broke off, produced a Duſt, infinitely ſmall, conſiſting of irregular and branched Particles. This infinitely fine Duſt is the ſubtile Matter of the firſt Element; the ſmall Globes or little Balls are the globous Matter, or the ſecond Element; the branched Particles are the ramous Matter, or the third Element. From the Aſſemblage of theſe three Elements, the Vortices had their Birth, as alſo the Sun, the Stars and the Planets, and in ſhort the material Univerſe.

While the Globes of the ſecond Element revolve about their own Center, the different Maſſes of theſe three different Matters each revolve about a common Center; whence proceed the Vortices.

The ſubtile Matter, or the Matter of the firſt Element, having leſs force than the ſmall Globes of the ſecond Element, endeavouring to get away from the common Center of its circular Motion, is repelled, and become re-united, in the very Center, or near the Center of the Vortex; hence aroſe the Sun, or one of the fixed Stars.

In ſeveral Vortices the more groſs Parts of the ſubtile Matter, and the branched Particles of the third Element, become hooked together, and driving the into the other, make a ſort of a Cruſt, which encompaſſes the interior Star; from whence proceeded the Planets and the Comets. The encruſted Stars, which wander from Vortex to Vortex, are the Comets. If they remain abſorbed in a Vortex, which force them to follow the Direction of its Motions, they become Planets: of theſe the Earth is one, which revolves about the Sun, being forced along by the Vortex of the Sun.

In ſhort, the Motions and Texture of the inſenſible Particles, produce the different Properties of Bodies, and of the Univerſe.

Let us examine in a ſuccinct manner the principal Opinions of this Syſtem, and we ſhall find them almoſt all falſe. You have already ſeen, the Abſurdity of allowing an indefinite Matter, and you actually know, that it is laying down a Principle as impoſſible as incomprehenſible; ſince it is neceſſary, that Matter ſhould be either abſolutely infinite or finite. You likewiſe know, that there is an Impoſſibility, that any Matter ſhould be put into Motion without a Vacuum, and conſequently form this infinitely fine Duſt, on which *Des Cartes* beſtows the Title of ſubtile Matter, and which he makes uſe of, to explain whatever gives him the greateſt Embarraſſment. Let us proceed farther, and come to the Vortices, of which you have ſo often heard ſpeak, and which in my Opinion, are nothing but ingenious Chimeras, and in yours of all other Things the moſt probable. I know the Love which you have for the Dialogues upon the Plurality of Worlds, written by the famous Monſieur *de Fontenelle*; you have told me a hundred times, that if all the Philoſophers reaſoned, explained and wrote, in ſo clear, ſo pleaſant, and ſo amuſing a manner, we ſhould find a greater Number of Perſons value themſelves for ſtudying Philoſophy. You know, Madam, I have always ſubſcribed to the juſt Praiſes, which you beſtowed on one of the greateſt and fineſt Genius's in the World; but I have likewiſe always ſaid, that all the Wit of Mankind could not make that true, which was not ſo in reality. As I have laid down a Law to myſelf, never to ſpeak of any thing to you, but what you are able to comprehend, I ſhall content myſelf with ſaying, that by the Rules of *Kepler*, a famous Aſtronomer and great Mathematician, Rules, whoſe Truth and Exactneſs are allowed, it is evidently proved,

proved, that if the ſmall Vortex of the Earth, could not preſerve its firſt Motion, that it muſt neceſſarily be deſtroyed by little and little. The great Vortices are not leſs contrary to the Rules of the ſame *Kepler*; but leaving his Reaſons, which may appear too obſcure to you, let us come to others, which are more ſuitable to your Capacity. If ever you ſhould be curious enough, to enquire after Opinions a little more mathematical, I would deſire you to read the eleventh Part of the *Secret Memoirs of the Republick of Letters*. I ſhould be a Gainer by that; ſince I ſhould be ſo happy, as to engage you to read one of my Performances. Let us return to the Vortices. How could the Planets be moved freely, and how could their Motion be kept from a ſenſible Decay, and even not be interrupted, if it was true that they moved about the Sun in a Medium full of Matter? If we admit of ſuch a Syſtem, we muſt firſt prove, in the cleareſt manner, that Motion can be performed in a Plenum: For you may perceive, Madam, if there is no Vacuum there can be no Motion: For as the Vortices fill all Space, the Revolutions of the Planets muſt neceſſarily be interrupted: But as that is not the Caſe, theſe various Vortices muſt needs be nothing elſe but Chimeras.

There is likewiſe, Madam, another Objection, as ſtrong and as evident as the former. How comes it to paſs that the Comets can traverſe the Vortices, in all Directions, without meeting with any Obſtacle, which may ſtop them in their Courſe, and without being diſturbed, and altered by theſe Vortices, though they often have Directions, quite contrary to their own? Muſt they not meet with void Spaces to facilitate their Paſſage? And if there are Roads void of all Matter, what will

become of the Vortices which fill all Space, and have a mutual Contact? Beſides; how is it poſſible, if there is no Vacuum, that Comets, which are of ſo immenſe a Magnitude, and move with ſuch prodigious Rapidity, do not abſorb the particular Motion of a Body, which is but an Atom, compared with their enormous Grandeur, and not determine them, by ſo ſuperior a Force, to follow the Courſe of their Motion. Let us freely own, Madam, that whatever Reformation the *Carteſians* have made, in their Syſtem, from time to time, as Opportunity offered, that it is only an ingenious amuſing Hypotheſis, but undoubtedly falſe and abſurd.

SECT. XXII. *An Examination of the Syſtem of Sir* Iſaac Newton.

SIR *Iſaac Newton* not being able to reliſh the Vortices of *Des Cartes*, and perceiving their Exiſtence was abſolutely impoſſible, eſtabliſhed an immenſe Vacuum, through which he pretended the Stars and Planets performed their Revolutions, without any Obſtacle to oppoſe them. The Planets, according to him, performed their Courſes in different Circles about the ſame Center, and the Comets theirs, in unequal excentrick Circles, and according to different Directions. This Syſtem is ſimple and eaſy to be underſtood, but it ſeemed impoſſible to many Natural Philoſophers. They objected that it was impoſſible it ſhould continue always in a circular Motion, without a particular Cauſe; becauſe every Body when it is free, or is not hindered by other Bodies, will run off in a ſtrait Line, from the Center of its Motion, by a Law acknowledged by all the Philoſophers

in

in the Oeconomy of the Univerſe. The Planets, according to the Syſtem of Sir *Iſaac Newton*, ſhould long ſince have loſt their circular Motion; they ſhould have deſcribed according to the general Law a right Line, and ſhould have mingled and loſt themſelves among ſome of the fixed Stars.

Theſe Difficulties, at firſt Sight, are very conſiderable: and there are others which I am going to produce. But is there any Syſtem entirely without them? Theſe never embarraſs an *Engliſh* Philoſopher, ſaid a modern Author, of your Acquaintance very merrily, in a pleaſant Letter, which he wrote concerning the different Hypotheſes of *Des Cartes* and Sir *Iſaac Newton*. Suffer me to copy here, what he has written upon that Subject, which will ſave me the Labour of ſaying the ſame thing in two different manners. I leave this puerile Care to Profeſſors in the Univerſities, who educate young People, who are deſigned for the Pulpit or the Bar. Sir *Iſaac Newton* * 'beſtowed upon Matter a new Quality called Attraction, by which the Stars have a conſtant 'Tendency towards the Center of their Motion. 'He commanded all Bodies, to attract each other 'in Proportion to their Maſs, or to make uſe 'of his own Terms, *in an inverſe Ratio, to the 'Squares of their Diſtances*. Thence forward all 'Bodies gravitated towards each other, and by 'the inviolable and unalterable Laws of Attraction tended mutually toward each other; they 'attracted the common Center of their Motion, 'about which they are revolved, and were attracted in their Turn by the ſame Center. The 'ſame Rules were eſtabliſhed, when all Bodies 'which revolve about a Center, come to revolve

* Chineſe Letters, Tom. I. p. 132. Lett. XVII. Edit. de la Haye.

' with this particular Center, about another Cen-
' ter, equally common to other Bodies. In this
Caſe the common Center equally attracts all
' the Bodies and the particular Centers, and is
' alſo attracted by them. By this univerſal Law
' you ſee how the Harmony of the Univerſe is
' diſcovered.

' The Planets and all the Heavenly Bodies gra-
' vitate towards each other by a mutual Attrac-
' tion, in the inverſe Ratio of the Squares of the
' Diſtances. Each of the five Sattelites of *Sa-*
' *turn* gravitates towards the four others, and
' and the four others upon it; they all five gra-
' vitate towards *Saturn*, which is their common
' Center. *Saturn* gravitates towards them, and
' all theſe Stars gravitate towards the Sun, their
' general Center; this holds with regard to the
' reſt of the Planets. The Sun in its turn gra-
' vitates towards all the Bodies, which gravitate
' towards him. It is this Gravitation, or this
' mutual Attraction, which is the ſole Cauſe of
' the Regularity of the Cœleſtial Motions, and
' of all the Wonders, which hitherto were looked
' upon by the Learned as impenetrable Myſteries.

' Notwithſtanding this Attraction, ſo neceſſary
' for the *Engliſh* Syſtem, and which he had ſo
' opportunely created, his Adverſaries pretend,
' that even though it ſhould be granted that there
' was a Power in Bodies, of mutually attracting
' each other, it would be impoſſible that it ſhould
' be the Cauſe of the Regularity of the Cœ-
' leſtial Motions, ſince Gravitation giving the Pla-
' nets a Tendency, which inceſſantly directs them,
' towards the Center of their Revolution, they
' ought to have made a Junction a long while ago,
' and to have been conſumed by the Sun, into
' which they would have fallen.

' This

'This Reflection would have appeared a little 'embarraſſing to Sir *Iſaac*, if he had not made 'uſe of the Privilege he had aſſumed of a new 'Creation: He endued the Planets with a ſecond 'Direction; the one perpendicular, cauſed by the 'Gravitation, which carried them down to the 'Center of their Orbits, and the other horizon-'tal, which keeps them at a Diſtance from it. 'Thus the Stars, forced to ſubmit to theſe two 'different Directions, and not having it in their 'Power to follow any entirely, were obliged to 'divide the Difference, and ſo took a Reſolution, 'to deſcribe a Circle. If we had gone on farther, 'to contradict Sir *Iſaac*, he would have given a 'third Direction to the Cœleſtial Bodies, and even 'a fourth if his Syſtem had wanted it.'

Behold, Madam, the Syſtem of Sir *Iſaac Newton* has met with as little Quarter, as that of *Des Cartes*. I make no Queſtion but you will demand, why I prefer this to the other, without looking upon it, as a thing impoſſible: my Reaſons, Madam, are theſe, and you know that I have often ſaid, when we perceive a thing to be evidently falſe, we ought to reject it without Heſitation.

The Syſtem of *Des Cartes* is undoubtedly under this Predicament, for I can eaſily demonſtrate its Falſity. But you ſhould likewiſe recollect, that I have likewiſe ſaid, that we ought not to affirm, that becauſe we cannot comprehend how a Thing ſhould be ſo or ſo, we ought not therefore to maintain, that it is abſolutely impoſſible. Beſides, there is ſomething more may be applied to the Syſtem of Sir *Iſaac Newton*. I acknowledge my Ignorance of what Attraction is, and yet I perceive that it actually ſubſiſts in every Particle of Matter. Chymical Experiments fully convince

me

me that this is true, and a thouſand others more familiar ſerve to ſtrengthen me in my Opinion; it is therefore very poſſible, that the Cauſe of the Gravitation of Bodies, and the different Directions of the Planets, proceed from this real Attraction; though the Nature of it exceeds my Comprehenſion. But what is ſtill of greater Conſequence, the Adverſaries of Sir *Iſaac Newton*, cannot but own, that from the Theory which is built upon Attraction all the Concluſions naturally follow, which are conformable to the Facts, which are eſtabliſhed by the beſt Aſtronomers. I aſk you, Madam, if you think, that theſe are trifling Probabilities, to ſupport the Truth of a Syſtem? An ingenious *Carteſian* ſincerely owns, that it is very difficult to prove an Hypotheſis, which quadrates ſo well with the moſt exact Aſtronomical Obſervations, is not ingenious Hypotheſis; *the Moon*, ſays Mr. *Fontenelle* *, *is the leaſt regular of all the Planets, and makes Elopements too often from the moſt exact Tables, and has many Irregularities, whoſe Principles are not fully underſtood.* *Dr.* Halley, *whoſe profound Knowledge in Mathematical Sciences does not prevent his being a good Poet, ſays in his* Latin *Verſes, which he has placed before the third Edition of Sir* Iſaac Newton's Principia, *'that the 'Moon hitherto could not be kept within Bounds, 'by the Bridle of Calculation, nor yet could be tamed 'by any Aſtronomer, but that this Task was at 'length performed in this new Syſtem,' all the Irregularities in her Motions ariſe from a Neceſſity, which render them capable of being predicted; and it is difficult to aſſert that a Syſtem, which confines her within ſuch Bounds, ſhould not be eſteemed as a very happy Syſtem, eſpecially if you look upon them, but*

* Eloges de Academiciens, *&c.* per Mr. *de Fontenelle*, Tom. II. p. 303. ſuiv.

but as a ſmall Part of the Whole, which contains with the ſame Succeſs a vaſt Number of other Explanations. That of the Ebbing and Flowing of the Tide is the natural Reſult of the Action of the Moon upon the Sea, combined with that of the Sun, that this wonderful Phænomenon is brought down to the Level of our Underſtandings.

Beſides what the Author has ſaid concerning Attraction, the Reader perhaps will be pleaſed to ſee what Mr. *Maupertuis* has written upon the ſame Subject, eſpecially as he is a *Frenchman*, and no way prejudiced in favour of the *Newtonian* Syſtem. His Words are nearly to the following Effect.

Though it is not for me to determine a Queſtion which divides the greateſt Philoſophers, I may be however allowed to compare their Ideas.

A Body in Motion, meeting with another, has the Power to move it. The *Carteſians* endeavour to ſolve every Phœnomenon by this Principle, and and to prove that Gravity itſelf is only the Conſequence thereof. The Foundation of their Syſtem has in this reſpect the Advantage of Simplicity; but it muſt be owned, that in the Detail of the Phœnomenagreat Difficulties neceſſarily occur.

Sir *Iſaac Newton*, not at all ſatisfied with the Explanations which the *Carteſians* give of the Phœnomena by Impulſion alone, endeavours to eſtabliſh another Principle of Action in Nature; which is, that all the Parts of Matter gravitate towards each other. Admitting this Principle, Sir *Iſaac Newton* ſolves all the Phœnomena in a moſt wonderful manner; and the more minutely we enquire into, the farther we proceed in his Syſtem, the more it ſeems to be confirmed. But the Foundation of the Syſtem ſeems to be leſs

ſimple,

ſimple, becauſe he ſuppoſes two Principles, and that Principle by which diſtant Bodies act upon each other, cannot be admitted without ſome Difficulty.

The Word Attraction is a ſort of a Scare-Crow to ſome Perſons; many have been afraid of bringing back the Doctrine of occult Qualities into Philoſophy.

But we ought to affirm, in Juſtice to Sir *Iſaac*, that he has never looked upon Attraction, as an Explanation of Bodies gravitating towards each other; he has often ſaid that he made uſe of this Term, only to denote a Fact, and not a Cauſe; that his Intention therein was only to avoid the Syſtems and their Explanations; that it might poſſibly be, that this Tendency was cauſed by a ſubtile Matter proceeding from Bodies, and was the Effect of a real Impulſion; but let that be as it will, it was always a principal Fact, which could not be receded from in explaining other Effects which depend thereon. Every regular Effect may be the Object of Mathematical Science, though its Cauſe is unknown; becauſe every thing which admits of *more* and *leſs* belongs to that Province, whatever its Nature may be; and the uſe that may be made of it, will be as certain as can be made of other Objects, whoſe Nature is allowed to be known. But if we are only allowed to treat of the latter ſort, Philoſophy would be confined in very narrow Bounds. *Galileo*, without knowing the Cauſe of Bodies gravitating towards the Earth, has however given us a very beautiful and very certain Theory of Gravity, in order to explain the Phœnomena, which depend thereon. If Bodies actually gravitate towards each other, why may we not be allowed to enquire into the Effects of this Gravity, without knowing the Cauſe? All therefore that we ought to examine into, is, whether Bodies have ſuch a Tendency

Tendency towards each other or not: if we find that they really have, we may content ourſelves with deducing the Explanation of the Phœnomena of Nature therefrom, leaving to more ſublime Philoſophers the Taſk of enquiring into the Cauſe of this Power.

This ſeems to me the wiſeſt Courſe, becauſe we are not allowed in my Opinion to aſcend to the firſt Cauſes, nor to comprehend how Bodies act upon each other.

But ſome of thoſe who reject Attraction look upon it as a Metaphyſical Monſter; they think its Impoſſibility ſo well proved, that whatever Nature ſeems to ſay in its favour, they had rather acknowledge a total Ignorance, than to make uſe of Explanations from ſo abſurd a Principle. Let us then enquire whether Attraction, when even conſidered as a Property of Matter, contains any Abſurdity.

If we had compleat Ideas of Bodies, if we knew what they are in themſelves, and what their real Properties are, and alſo what their true Number is, we ſhould not at all be embarraſſed to decide whether Attraction is a real Property of Matter or not. But we are ſo far from having ſuch Ideas, that we know nothing of Bodies, but from certain Properties without knowing at all the Subſtance in which theſe Properties are united.

We perceive different Aſſemblages of theſe Properties, and this is ſufficient to denote the Ideas of ſuch or ſuch particular Bodies. We can advance a Step farther, and diſtinguiſh the different Orders among theſe Properties. We perceive that while ſome vary in different Bodies, others are met with therein always the ſame. And from thence we look upon theſe as eſſential Properties, and as the Foundation of the reſt.

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The leaſt Attention will inform us, that Extenſion is one of theſe invariable Properties. We perceive it in all Bodies univerſally, and we perſuade ourſelves, that the other Properties cannot ſubſiſt without it, and that it is the Support of the reſt.

We alſo find that there are no Bodies, which are not ſolid or impenetrable: and therefore we look upon Impenetrability, as an eſſential Property of Matter.

But is there any neceſſary Connection between theſe Properties? Cannot Extenſion ſubſiſt without Impenetrability? Can I diſcern from the Property of Extenſion what other Properties muſt accompany it? This is what I cannot perceive in any manner.

After theſe eſſential Properties of Bodies, I diſcover others, which, though they do not belong always to all Bodies, they however belong to them always in a certain State; I mean by this the Property which Bodies have of Motion, and moving others which they meet with.

This Property, though not ſo univerſal as thoſe we were ſpeaking of, ſince it is allowed to a Body in a certain State, may however be taken for a general Property, relative to this State, ſince it is to be met with in all Bodies which are in Motion.

But ſtill farther, is it neceſſary the Aſſemblage of theſe Properties ſhould always take Place; and may all general Properties of Bodies, be reduced to this? It ſeems to me very bad reaſoning to endeavour to reduce them thereto.

It would be ridiculous to aſſign to Bodies other Properties than thoſe which are warranted by Experience; but it would perhaps be ſtill more ſo, to determine, from a certain number of Properties hardly known, that there are no others, and

and in a dogmatical manner to exclude them quite; as if we had a meaſure of the Capacity of Subſtances, when we are only acquainted with a ſmall Number of their Properties.

We have only a right to exclude from any Subſtance ſuch Properties as are contradictory to thoſe we know are met with therein: Mobility being plainly in Matter, we may confidently aſſert, that Immobility cannot belong thereto: Matter being impenetrable, it cannot be penetrable. Theſe are Identical Propoſitions, and are all that are allowed in Caſes like this.

Theſe are the only Properties therefore, which we may venture to exclude. But have Bodies over and above the Properties we are acquainted with, ſtill others of Gravitation, or of tending towards each other? It is only to Experience that we owe the Knowledge of the other Properties of Bodies, and Experience can only inform us, whether they have this likewiſe.

I hope I ſhall not be ſtopped here to be told, that this Property in Bodies, of gravitating towards each other, is leſs conceivable than thoſe which are acknowledged by all Mankind. The Manner whereby Properties reſide in a Subſtance, is always incomprehenſible to us. Nobody is aſtoniſhed to ſee a Body in Motion, and to communicate Motion to others; the Cuſtom of ſeeing this Phœnomenon takes away every thing that is wonderful therein; but Philoſophers, who are determined to decide *à priori*, what Properties Bodies ought to have, and what ought to be baniſhed therefrom; ſuch Philoſophers, I ſay, will not believe that the attractive Force is more conceivable than the impulſive. What is impulſive Force? How does it reſide in Bodies? Who could have gueſſed that it reſided therein, before they had ſeen Bodies ſtrike againſt each

each other? The Reſidence of the other Properties in Bodies is not one Jot clearer than this. How does Impenetrability and the other Properties come to be joined to Extenſion? This will always be a Myſtery to us.

But perhaps it may be ſaid, that Bodies have no impulſive Force. A Body communicates no Motion to the Body it ſtrikes againſt; it is God himſelf who moves the Body ſtruck, or who has eſtabliſhed Laws for the Communication of theſe Motions. Here the Queſtion is given up without perceiving that it is ſo, if the Body in Motion has not the Property of moving others; if when a Body ſtrikes another the latter is not moved, unleſs God moves it, and his having eſtabliſhed Laws
96 for the Diſtribution of Motion; what Right have we to determine that God has not eſtabliſhed ſimular Laws for Gravitation? When it is neceſſary to have Recourſe to an Almighty Agent, and we are only ſtopped by a Contradiction, it is neceſſary to aſſert that the Eſtabliſhment of ſuch Laws imply a Contradiction; but this ought not to be ſaid; and then it is more difficult for God to make two diſtant Bodies tend or move towards each other, or to wait for their being moved till one Body ſtrikes againſt another?

But there is another Argument which may be brought againſt Attraction: The Impenetrability of Bodies is a Property which all Philoſophers are agreed in. This Property being admitted, a Body which moves towards another cannot continue in Motion without penetrating it; but Bodies are impenetrable; therefore God has eſtabliſhed a Law which grants Motion to one conſiſtent with the Impenetrability of both; here is then the Eſtabliſhmen tof a new Law become neceſſary in caſe of a Shock. But two Bodies remaining at a Diſtance,

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we do not ſee any Neceſſity there is of eſtabliſhing a new Law.

This Argument ſeems to me the moſt ſolid that can be brought againſt Attraction: However, if no Anſwer could be given thereto, it proves no more than that there appears to be no Neceſſity for this Tendency of Bodies; which is a Thing I did not undertake to prove; it is ſufficient for me to ſhew that this Tendency is poſſible.

But let us examine this Argument. The different Properties of Bodies are not, as we have ſeen, all of the ſame Kind; ſome are eſſential, and belong to Matter in general, becauſe they are always to be found therein, as *Extenſion* and *Impenetrability*.

There are another Sort leſs neceſſary, and are nothing but Condition, in which all Bodies may be found, as *Reſt*, and *Motion*.

In ſhort, there are other Properties more particular, which diſtinguiſh Bodies, as a certain *Figure*, *Colour*, *Smell*, &c.

If it happens that Properties of different Sorts oppoſe each other (for two eſſential Properties are not concerned herein) it is neceſſary, that the inferior Property ſhould yield to the moſt neceſſary, which admits of no Variety.

Let us examine then, what will happen when one Body moves towards another, whoſe Impenetrability oppoſes it's Motion. The Impenetrability will ſubſiſt without Alteration; but the Motion, which is only a Condition, in which the Body may be found or not, and which may be varied infinitely, will always yield to Impenetrability, becauſe the Body may be moved or not moved in this or that Manner; but it muſt be always impenetrable, and impenetrable in the ſame Manner. There will then happen in the Motion

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of the Body, a Phœnomenon, which will be the Conſequence of the Subordination between the two Properties.

But if Gravity was a Property of the firſt Rank; if it was joined to Matter independantly of other Properties; we could not perceive it's Eſtabliſhment to be neceſſary, becauſe it would not be owing to the Combination of the former Properties. To bring this Argument againſt Attraction, would be the ſame thing, as if when we were about to explain a certain Phœnomenon, we ſhould conclude, that this Phœnomenon is more neceſſary than the eſſential Properties of Matter, without obſerving that this Phœnomenon only ſubſiſts in conſequence of theſe eſſential Properties. All we have ſaid does not prove that there is any ſuch thing as Attraction in Nature, nor have I attempted to prove that there is; I only propoſed to examine whether Attraction, conſidered as an inherent Property of Matter, was metaphyſically impoſſible. If it was, the moſt cogent Phœnomena of Nature ought not to make it be received. But if it implies neither Impoſſibility nor Contradiction, we may freely examine if the Phœnomena prove it or not. Attraction is nothing but a Queſtion of Fact; we may ſeek for it in the Syſtem of the Univerſe, and whether it's a Principle actually in Nature, how far it is neceſſary to explain the Phœnomena, or whether it is introduced to no Manner of Purpoſe, to explain what may be better explained without it.

After Mr. *Maupertuis* had examined the *Newtonian* Syſtem, and after he had undergone infinite Dangers and Difficulties in the frozen Regions of the North, in verifying a particular Part of it, he concludes, 'That we may look upon Gravity as 'a Power diffuſed through all Parts of Matter, by which

'which all its Particles attract each other. The 'Concurrence of all the Force of Matter which 'compoſes the Earth, attracts and cauſes Bodies to 'fall towards it's Surface, keeps the Moon in 'her Orb; and produces with regard to the other 'Planets, and with reſpect to the Sun, the like *Phæ-* '*nomena*, always in Proportion to the Quantity of 'their Force, their Direction, and their Diſtance.'

SECT. XXIII. *A Recapitulation.*

THUS you have had, Madam, a brief Account of the Opinions of Philoſophers concerning the firſt Principles of Nature. It is alſo by the Means of theſe Principles, that they explain moſt of the ſecret Effects of Nature. You ſee how full of Uncertainty their Reaſonings are; for what evident Conſequence can they draw from ſuch uncertain Principles? So that I think, Madam, that the true Natural Philoſophy is nothing more than an Experimental Knowledge, which makes known a great many Secrets to us, whoſe firſt Operations, notwithſtanding it is impoſſible for us to come to the Knowledge of, having, Madam, as I have told you above, no Idea of the manner how the active Parts, or firſt Movers of Matter operate; ſo that *Des Cartes* explains his Experiments by the means of *ſubtile Matter*; *Gaſſendus* by *Atoms and a Vacuum*; *Newton* by *Attraction*, *&c.* But what ſignifies it to know preciſely how the firſt Principles operate, ſeeing that we know that the manner of their operating certainly produces the Effects, which we ſeek after, and we can reap all the Advantages therefrom, that we ſtand in need of. God, by concealing the firſt Operations

Operations of Matter from us, which are Secrets that are known to him alone, has given us the Power to procure them by Means, which he has given us the Knowledge of, and this reſerving to himſelf the firſt Principles of Nature, he has granted us the uſe of an experimental Knowledge, which is ſufficient for our Wants; and which is not above the Capacity of all thoſe, who have Curioſity and Patience enough to apply themſelves diligently thereto.

The End of the Firſt Volume.

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